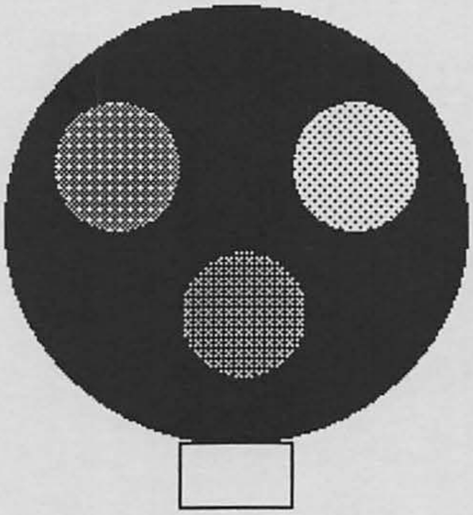
L&W
Industries, Inc.
SPRINGFIELD
MISSOURI

1-800-U KALL US

L&W
Industries, Inc.
SPRINGFIELD, MISSOURI

1-800-U KALL US

L &W INDUSTRIES



25TH
ANNIVERSARY

L&W INDUSTRIES, INC.

PRODUCT LINE

FLASHERS
HOODS & BACKGROUNDS (ALL MODELS)
MASTS
X-ARM JCT BOXES & ELBOWS
LENSES & MIRRORS
GATEARMS & LAMPS
CONVERSION BRACKETS
BREAKAWAYS & SHEAR BOLTS
HOUSES & CASES
FOUNDATIONS
BATTERY BOXES
TERMINATION BOXES

SPLICING SLEEVES
BONDSTRAND
BONDSTRAND SLEEVES
BONDSTRAND CLAMPS
RAIL PLUGS
RAIL CLIPS
BONDING BITS
SIGNAL BULBS
SIGNS & MTR BRACKETS
COPPER STAPLES
TEST SHUNTS
WIRE TAGS & MARKING PENS
TEST LINKS & STRAPS

AAR NUTS
AAR WASHERS
CONNECTORS
EYELETS
TERMINAL BLOCKS
BINDING POSTS
COLORLIGHTS
LADDERS
PLATFORMS
SIGNAL BASES
STANDOFFS
COLORLIGHT LENSES
PINNACLES

Note: This is not a complete listing. Please feel free to call on any other products you require.

ENGINEERING CIRCUIT DESIGN

FOR HIGHWAY CROSSINGS AND CONTROL SYSTEMS. ALL WORK IS DONE ON AUTOCAD SYSTEMS. OUR DESIGNERS HAVE OVER 50 YEARS OF COMBINED EXPERIENCE IN CIRCUIT DESIGN.

PREPACKAGING & WIRING OF INSTRUMENT HOUSES

L&W CAN PREWIRE INSTRUMENT HOUSES TO YOUR SPECIFICATIONS WITH THE BRAND OF EQUIPMENT YOU DESIRE. IN ADDITION WE CAN PURCHASE OR MANUFACTURE ALL OTHER EQUIPMENT NECESSARY FOR COMPLETE INSTALLATION. ALL MATERIAL FOR YOUR PROJECT CAN BE WAREHOUSED AT L&W UNTIL COMPLETE AND READY FOR SHIPMENT DIRECT TO YOUR JOB SITE.

COMPLETE TURNKEY INSTALLATION OF SIGNAL SYSTEMS

L&W CAN HANDLE YOUR SIGNAL PROJECTS FROM THE PLANNING AND DESIGN STAGE THROUGH INSTALLATION, TESTING, CUTOVER, AND TRAINING. WE HAVE OVER 20 YEARS EXPERIENCE WITH TURNKEY INSTALLATIONS.

3149 E Chestnut Expressway Springfield, Mo 800-852-5587(telephone) 417-864-4473)fax

L & W Industries, Inc

3 X 4 SIGNAL HOUSE

(PATENT PENDING)

IMPROVES WORKERS SAFETY WHILE INSTALLING & MAINTAINING SIGNALS PLUS REDUCES INSTALLATION & MAINTENANCE COSTS

SAFETY FEATURES

-WIDER LADDER WITH BETTER RUNGS FOR IMPROVED FOOT GRIP
-WIDER PLATFORM SURFACE TO STAND ON
-SIDE RAILINGS AND TOE BOARDS
-WITH NEW PLATFORM ARRANGEMENT & L&W'S NEW REAR REMOVEABLE DOUBLET, MAINTAINERS HAVE EASIER AND SAFER ACCESS TO SIGNAL HEADS

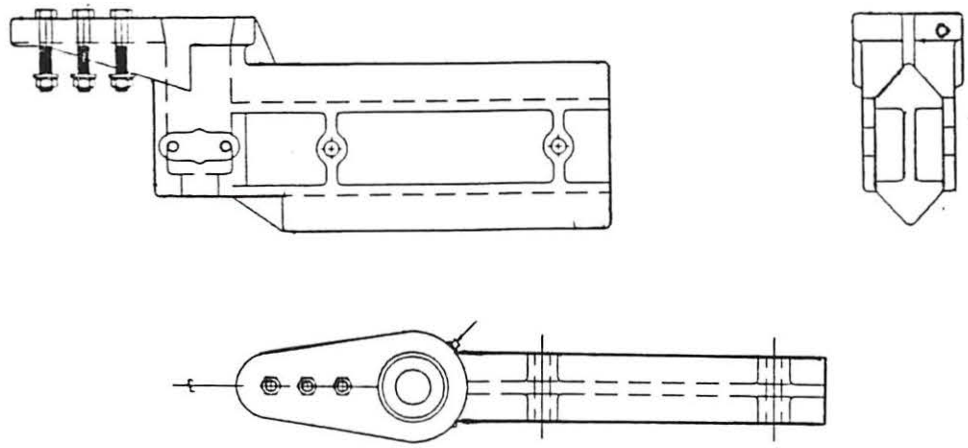
COST SAVINGS

-ELIMINATES SIGNAL FOUNDATIONS
-ELIMINATES JUNCTION BOX BASE
-REDUCES SIZE OF MAST TO 4FT
-ELIMINATES LADDER & PLATFORM ASSEMBLY
-ELIMINATES LADDER BASE
--ELIMINATES RUNNING CABLE FROM CASE TO SIGNALS
-ELIMINATES ASSEMBLY TIME FOR LADDER & PLATFORMS
-REDUCES OVERALL ASSEMBLY & INSTALLATION TIME FOR LOCATION
-UNIT IS SHIPPED IN 4 COMPONENTS, HOUSE, PLATFORM, SIGNAL MAST & SIGNALS
-WITH ELIMINATION OF ABOVE ITEMS YOU WILL ALSO EXPERIENCE SAVINGS BY HAVING FEWER ITEMS TO MAINTAIN
-

FOR ADDITIONAL SAVINGS L&W CAN PREWIRE YOUR HOUSE & SHIP IT DIRECT TO THE PROJECT LOCATION

L & W Industries, Inc

CAST ADAPTOR
FOR
L&W HG1
HEXAGON GATEARM



1574-5X

NOW YOU CAN CONVERT YOUR STANDARD RECTANGULAR GATEARMS TO HIGH STRENGTH HEXAGON GATEARMS WITHOUT CHANGING CONVERSION BRACKETS. THE L&W HEXAGON CAST ADAPTOR MAKES THIS POSSIBLE.

THE L&W HEXAGON GATEARM CAST ADAPTOR IS IDENTICAL TO THE STANDARD RECTANGULAR CAST ADAPTOR EXCEPT IT HAS BEEN CAST TO FIT THE HEXAGON GATEARM. MOUNTING AND OPERATION OF THE HEXAGON CAST ADAPTOR IS IDENTICAL TO THE STANDARD RECTANGULAR CAST ADAPTOR.

3149 E Chestnut Expressway Springfield, MO 65802 800-852-5587(telephone) 417-864-4473(fax)

L&W INDUSTRIES, INC.

LOCATION

SPRINGFIELD, MISSOURI -- CENTRALLY LOCATED IN THE UNITED STATES

SALES OFFICES

SPRINGFIELD, MO (800-852-5587) Bob Watkins
OMAHA, NE (402-333-5053) Carroll Cook
CHICAGO, IL (708-481-5038) Marvin Giger

MONTREAL, QUEBEC (Macrail)

MANUFACTURING SPACE

50,000 SQ FT PLUS 15,000 SQ FT PLANNED EXPANSION

QUALITY ASSURANCE PROGRAM

L&W HAS IN PLACE A QUALITY ASSURANCE PROGRAM WHICH HAS BEEN APPROVED BY TWO MAJOR RAILROADS. L&W IS DEDICATED TO HAVING THE BEST QUALITY PROGRAM AND PRODUCTS IN THE INDUSTRY.

DELIVERIES

MAINTENANCE ITEMS USUALLY ARE SHIPPED WITHIN 30 DAYS AFTER RECEIPT OF THE ORDER. IN MANY CASES, SMALLER EMERGENCY ORDERS CAN BE SHIPPED THE SAME DAY. ORDERS FOR LARGER ITEMS RARELY EXCEED 60 DAYS.

PRICING

L&W INDUSTRIES MAINTAINS A COMPETITIVE PRICING STRUCTURE WHICH WE ARE CONFIDENT WILL FIT INTO YOUR BUDGETING REQUIREMENTS. ON MOST PRODUCTS, PRICES CAN BE QUOTED IMMEDIATELY.

L&W industries, inc.

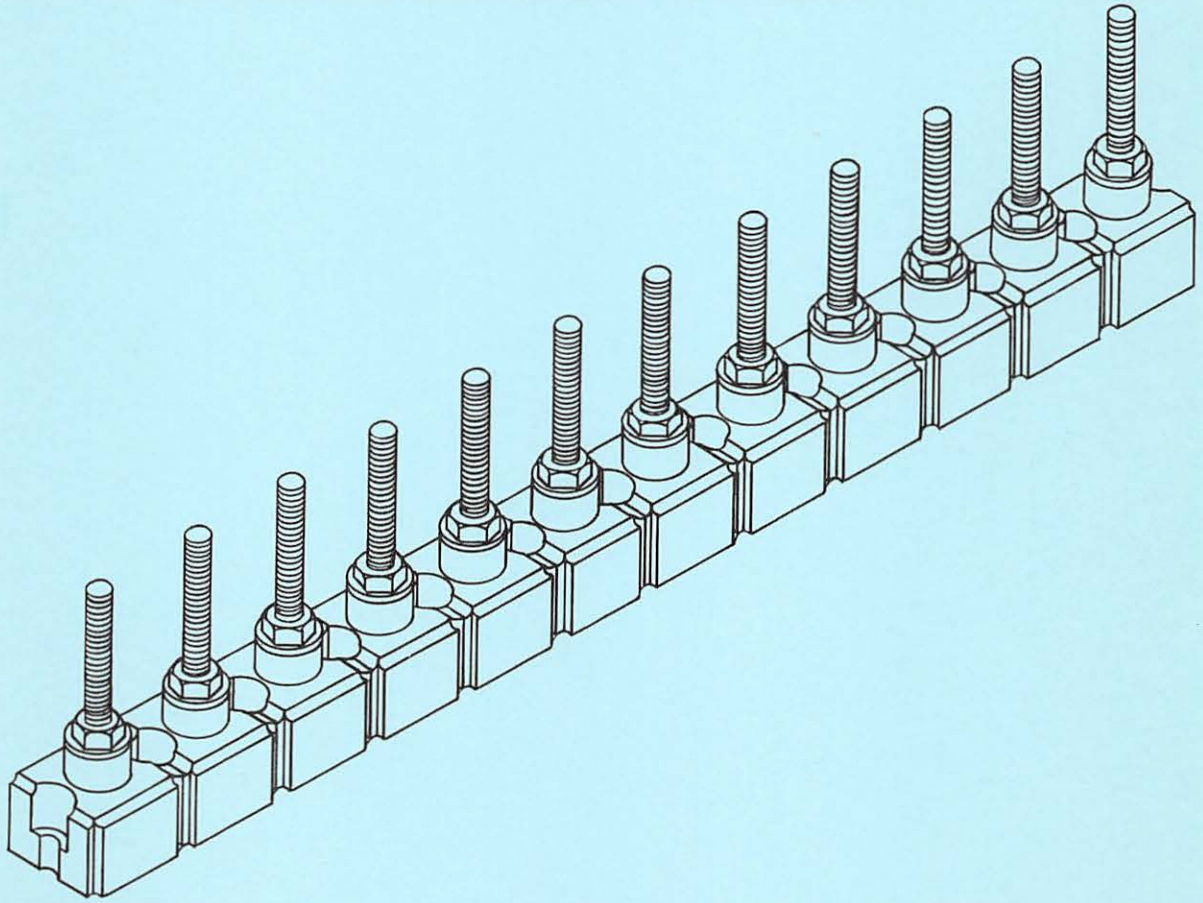
SPRINGFIELD, MO

11/30/93

SERVING THE RAILROAD INDUSTRY FOR 25 YEARS

A MANUFACTURER DISTRIBUTOR DESIGNER & INSTALLER OF RAILROAD SIGNAL EQUIPMENT & SYSTEMS

TERMINAL BLOCKS AND ACCESSORIES



APRIL, 1987

CONNECTORS

All L&W Connectors meet AAR specification 14.1.

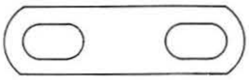


FIG. 1

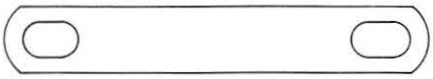


FIG. 2

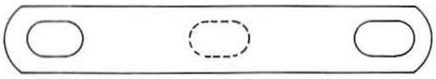


FIG. 3

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
FIG. 1, Connector, Nickel-plated, 1" centers AAR No. 10763 Cross Reference: GRS No. P3-147 W-C-H No. 219-5 Safetran No. 023839-2	L&W P/N 2200
FIG. 2, Connector, Nickel-plated, 2 3/8" Centers AAR No. 10764 Cross Reference: Safetran No. 023839-1 Harmon No. 32029-2	L&W P/N 2201
FIG. 3, Connector, Continuous, Nickel-plated, 1" Centers. To order, specify number of holes required. For example, to order a Twelve Hole Connector, replace ## with 12 ie. 2216-12. AAR. No. 10766 Cross Reference: Safetran No. 023839-5	L&W P/N 2216-##

SLIDE CONNECTORS

All L&W Slide Connectors meet AAR specification 14.1.

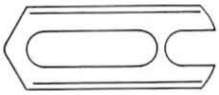


FIG. 4

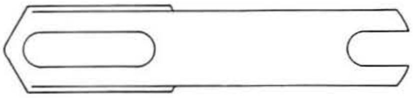


FIG. 5

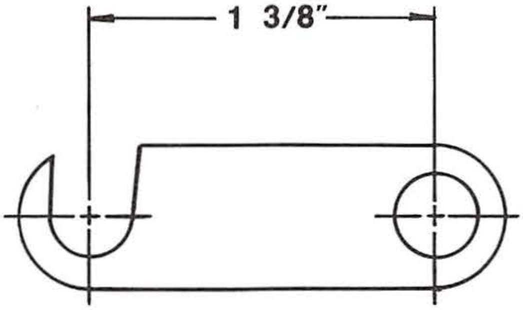
TO ORDER: Specify description and ordering refereence.

DESCRIPTION	ORDERING REFERENCE
FIG. 4, Connector, Slide, Nickel-plated, 1" centers AAR No. 10761 Cross Reference: W-C-H No. 1056-2 Safetran No. 023837 Harmon No. 32029-2	L&W P/N 2215
FIG. 5, Connector, Slide, Nickel-plated, 2 3/8" Centers. AAR No. 10762 Cross Reference: W-C-H No. 1056-4 Safetran No. 023836 Harmon No. 32029-0	L&W P/N 2217

L&W industries, inc.

SWITCH BOX JUMPER

The L&W Switch Box Jumper meets AAR specification 14.1.



TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Jumper, Switch Box, Nickel-plated Cross Reference: GRS No. P3-109	L&W P/N 2206

L&W industries, inc.

TERMINAL HARDWARE

All L&W Terminal Hardware meets AAR specification 14.1

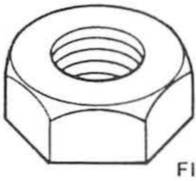


FIG. 1

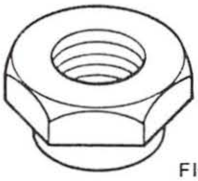


FIG. 2

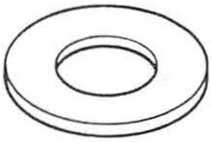


FIG. 3

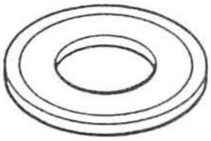


FIG. 4

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
FIG. 1, Clamp Nut, Nickel-plated AAR No. 10707 Cross Reference: GRS No. P62-333 W-C-H No. 10707 Safetran No. 023832 Harmon No. 13079	L&W P/N 2202
FIG. 2, Binding Nut, Nickel-plated AAR No. 10706 Cross Reference: GRS No. P3-328 W-C-H No. 10706 Safetran No. 023831	L&W P/N 2204
FIG. 3, Clamp Washer, Flat, Nickel-plated Cross Reference: GRS No. P76-108	L&W P/N 2209
FIG. 4, Binding Washer, Beveled, Nickel-plated AAR No. 10708 Cross Reference: W-C-H No. 10708 Safetran No. 023834 Harmon No. 13074	L&W P/N 2203

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TERMINAL HARDWARE

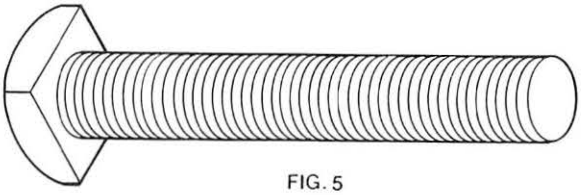

FIG. 5

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
FIG. 5, Binding Post, 14-24 X 1 1/2" Square Head, Head is 3/8" square AAR No. 10709 Cross reference W-C-H No. 100709 Safetran No. 023833	L&W P/N 2236
Binding Post, 14-24 X 1 1/2", complete with one Clamp Nut, one Clamp Washer,two Binding Nuts and two Binding Washers AAR No. 107010 Cross Reference: W-C-H No. 107010 Safetran No. 0238338-X	L&W A/N 2236-X
FIG. 5, Binding Post 14-24 X 2 1/4", Square Head, Head is 3/8" square Cross Reference: W-C-H No. 10709-B	L&W P/N 2237
Binding Post, 14-24 X 2 1/4", complete with one Clamp Nut, one Clamp Washer, two Binding Nuts, and two Binding Washers	L&W A/N 2237-X

L&W industries, inc.

INSULATED TEST LINKS

L&W Insulated Test Links consist of a Nickel-plated Connector insulated with a Fiber Bushing, and a Gold-plated nut. Insulated Test Links are available with 1" or 2 3/8" centers to fit either 1" or 2 3/8" Terminals Blocks.

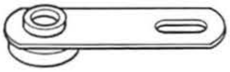

FIG.1

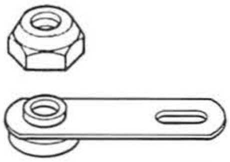

FIG. 2

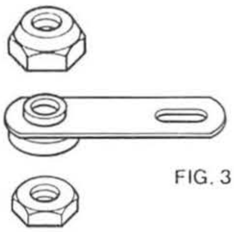

FIG. 3

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
FIG. 1, Insulated Test Link, 1" Centers with Insulator Cross Reference: Safetran No. 024620-3X	L&W P/N 2205
FIG. 2, Insulated Test Link, 1" Centers with Test Nut and Straight Test Link Cross Reference: Safetran No. 024620-2X	L&W A/N 2205-X
FIG. 3, Insulated Test Link, 1" Centers with Test Nut, Straight Test Link, and Clamp Nut Cross Reference: Safetran No. 024620-1X	L&W A/N 2205-1X

L&W industries, inc.

INSULATED TEST LINKS

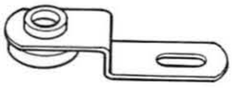

FIG. 4

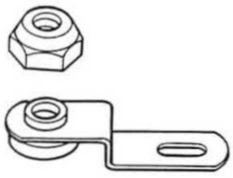

FIG. 5

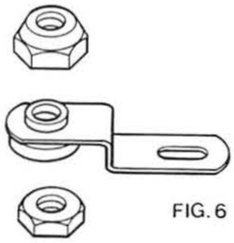

FIG. 6

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
FIG. 4, Insulated Test Link, Offset, 1" Centers with Insulator Cross Reference: Safetran No. 024620-19X	L&W P/N 2205-7
FIG. 5, Insulated Test Link, 1" Centers with Test Nut and Offset Test Link Cross Reference: Safetran No. 024620-11X	L&W A/N 2205-11X
FIG 6. Insulated Test Link, 1" Centers with Test Nut, Offset Test Link, and Clamp Nut Cross Reference: Safetran No. 024620-7X	L&W A/N 2205-7X

L&W industries, inc.

INSULATED TEST LINKS

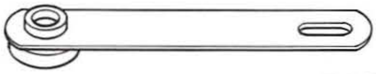

FIG. 7

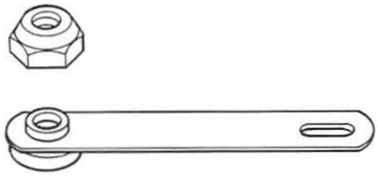

FIG. 8

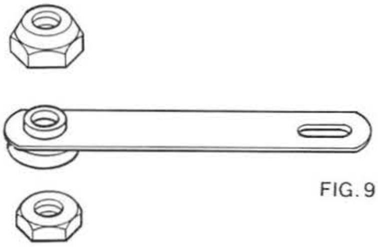

FIG. 9

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
FIG. 7, Test Link, 2 3/8" Centers with Insulator Cross Reference: Safetran No. 024620-6X GRS No. P3-324	L&W P/N 2211
FIG. 8, Insulated Test Link, 2 3/8" Centers, with Test Nut, and Straight Test Link Cross Reference: Safetran No. 024620-5X	L&W A/N 2211-X
FIG. 9, Insulated Test Link, 2 3/8" Centers, with Test Nut, Straight Test Link, and Clamp Nut Cross Reference: Safetran No. 024620-4X	L&W A/N 2211-1X

L&W industries, inc.

INSULATED TEST LINKS

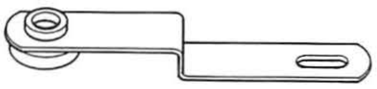

FIG.11

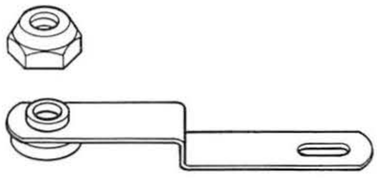

FIG.10

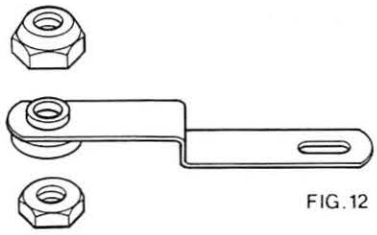

FIG.12

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
FIG. 10, Test Link, 2 3/8" Centers, Offset, with Insulator	L&W P/N 2211-7
FIG. 11, Insulated Test Link, 2 3/8" Centers, with Test Nut, and Offset Test Link Cross Reference: Safetran No. 024620-12X	L&W A/N 2211-12X
FIG. 12, Insulated Test Link, 2 3/8", Centers, with Test Nut, Offset Test Link, and Clamp Nut Cross Reference: Safetran No. 024620-8X	L&W A/N 2211-8X

Test nut only, Gold plated	L&W P/N 2208

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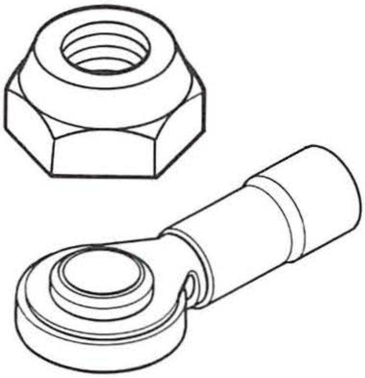
Springfield, MO 65802
417/864-5411

L&W industries, inc.

INSULATED TEST EYELET

The L&W Insulated Test Eyelet consists of Ring Tongue Terminal, Fiber Bushing, and Gold-plated Nut.



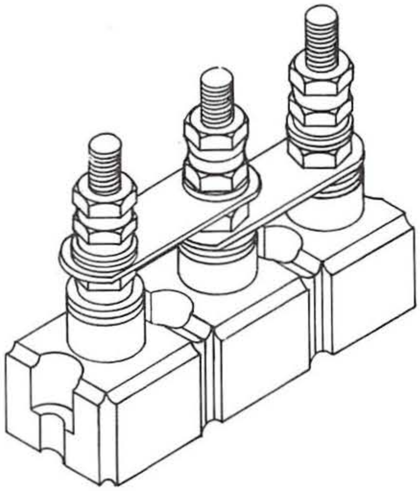
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Insulated Test Eyelet complete with insulated Bushing	L&W P/N 2207
Insulated Test Eyelet complete with insulated Bushing and Gold-plated Test Nut.	L&W A/N 2207-X

L&W industries, inc.

THREE POST TEST TERMINAL

The L&W Three Post Test Terminal consists of a 1X3 Terminal Block with 1" Centers, one or two Test Links, and one or two Test Nuts as required. Also included: Binding Nuts, Clamp Nuts, and Washers. A Three Post Test Terminal with one Test Nut and one Test Link will provide a Single Circuit Switch. The Three Test Post Terminal with two Test Nuts and two test Links provide a Double Circuit Switch.



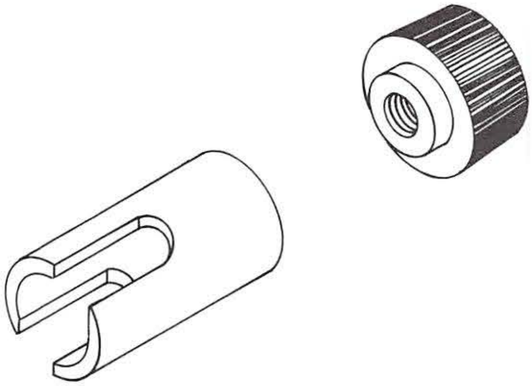
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Three Post Test Terminal, with one Test Nut and one Test Link for Single Series Circuit Switch Cross Reference: Safetran No. 023551-7X	L&W A/N 2210-X
Three Post Test Terminal, with two Test Nuts and two Test Links for Double Circuit Switch Cross Reference: Safetran No. 023551-8x	L&W A/N 2210-1X
Terminal Block, Three Post with Clamp Nut and Washer	L&W P/N 2230-3

L&W industries, inc.

TERMINAL POST INSULATING SHIELD AND CAP

L&W Terminal Post Insulating Shields and Caps are used to isolate Terminal Posts carrying high voltage circuits. The Insulating Shield is manufactured form Red or Black Fiber and is grooved to provide entry for the wires and still cover the Terminal Post. The Insulating Cap is manufactured from plastic and is threaded so it can be screwed to the top of the Terminal Post.



TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Terminal Post Insulating Shield, Black Fiber	L&W P/N 2220
Terminal Post Insulating Shield, Red Fiber	L&W P/N 2220-R
Terminal Post Insulating Cap Cross Reference: GRS No. 3127 W-C-H No. R2000-1	L&W P/N 2221
Terminal Post Insulating Shield, Black Fiber, and Insulating Cap	L&W A/N 2220-X
Terminal Post Insulating Shield, Red Fiber and Insulating Cap Cross Reference: Safetran No. 023408-7X	L&W A/N 2220-XR

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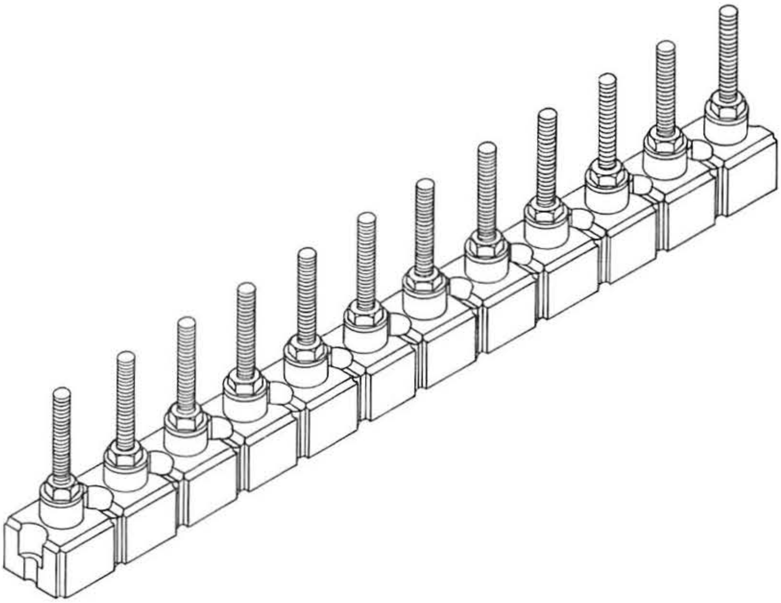
L&W industries, inc.

12-POST TERMINAL BLOCK

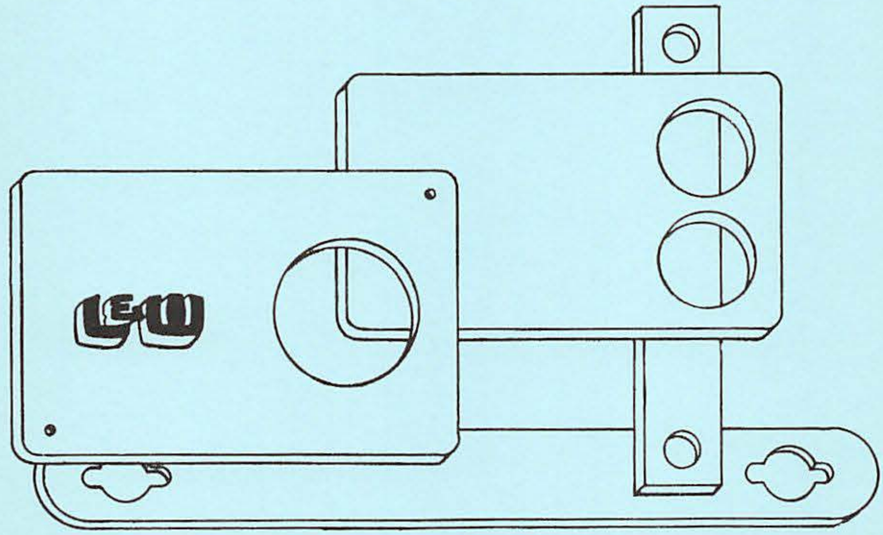
L&W 12 Post Terminal Blocks are molded with Phenolic material and 12 Nickel-plated Terminal Binding Posts, aligned on 1" centers. Terminal Blocks are provided with Clamp Nuts and Washers. Binding Nuts and Washers are provided in a separate bag.



TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
12 Post Terminal Block, with Clamp Nuts and Washers	L&W P/N 2230
12 Post Terminal Block, with Clamp Nuts, Flat Washers and Hardware Bag AAR No. 10540 Cross Reference: GRS No. A3129 Safetran No. 023390-11X W-C-H No. 2508-112	L&W A/N 2230-X
Hardware Bag containing Binding Nuts and Washers (24 each)	L&W P/N 2233

COLORED FIBER TAGS



July, 1986

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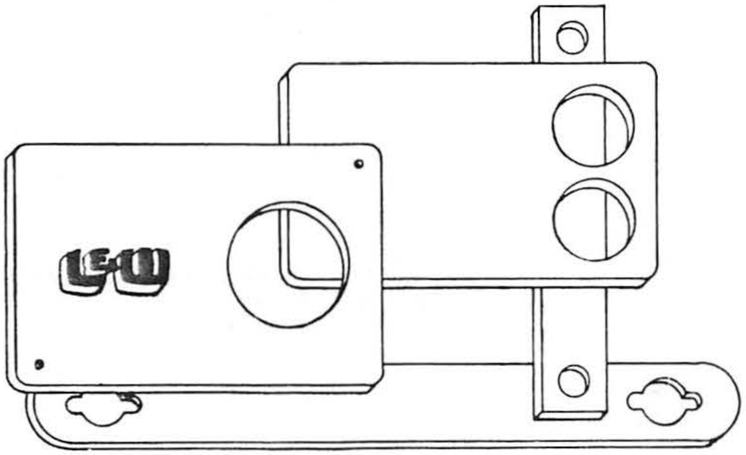
Springfield, MO 65802
417/864-5411

L&W industries, inc.

COLORED FIBER TAGS

L&W Colored Fiber Tags are die cut to various shapes and sizes. These tags are manufactured from Black, Red or Gray 1/16" thick, vulcanized fiber or 1/32" thick, White Plastic with matte on one side.



COLORED FIBER TAGS

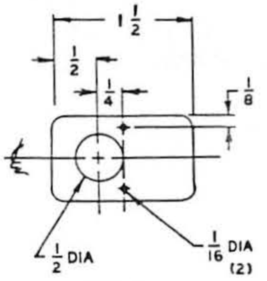

1 1/2
1/2
1/4
1/8
℄
1/2 DIA
1/16 DIA (2)

FIG. 1

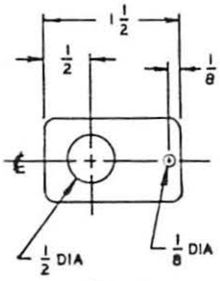

1 1/2
1/2
1/8
℄
1/2 DIA
1/8 DIA

FIG. 2

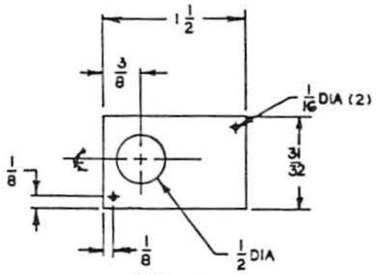

1 1/2
3/8
1/16 DIA (2)
℄
31/32
1/8
1/8
1/2 DIA

FIG. 4

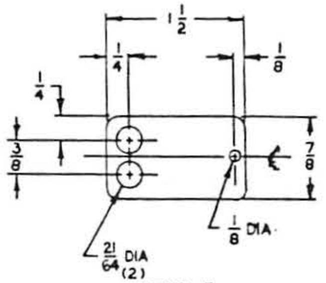

1 1/2
1/4
1/8
1/4
3/8
℄
7/8
1/8 DIA
21/64 DIA (2)

FIG. 5

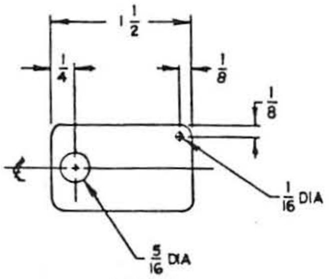

1 1/2
1/4
1/8
1/8
℄
1/16 DIA
5/16 DIA

FIG. 6

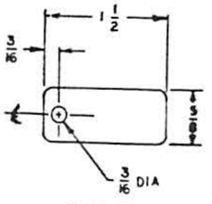
TO ORDER: Specify description and ordering reference. To order a pre-varnished tag, add suffix "A" to P/N.

DESCRIPTION	ORDERING REFERENCE
FIG. 1, Black Red Gray White Plastic	L&W P/N 2004 L&W P/N 2005 L&W P/N 2006 L&W P/N 2006-1
FIG. 2, Black Red Gray White Plastic	L&W P/N 2007 L&W P/N 2007-1 L&W P/N 2008 L&W P/N 2008-1

DESCRIPTION	ORDERING REFERENCE
FIG. 4, Black Red White Plastic	L&W P/N 2012 L&W P/N 2013 L&W P/N 2013-1
FIG. 5, Black Red Gray White Plastic	L&W P/N 2014 L&W P/N 2015 L&W P/N 2016 L&W P/N 2016-1
FIG. 6, Black Red Gray *White Plastic	L&W P/N 2017 L&W P/N 2018 L&W P/N 2019 L&W P/N 2019-1

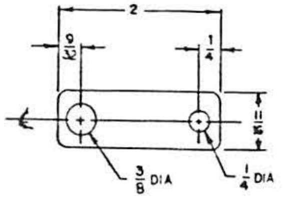
L&W industries, inc.

COLORED FIBER TAGS



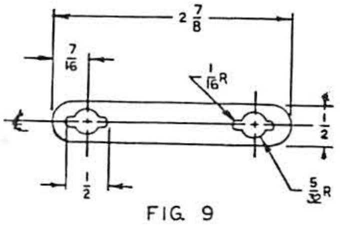
1 1/2
3/16
5/8
℄
3/16 DIA

FIG. 7



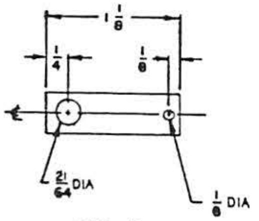
2
9/32
1/4
11/16
℄
3/8 DIA
1/4 DIA

FIG. 8



2 7/8
7/16
1/16 R
1/2
℄
1/2
5/32 R

FIG. 9



1 1/8
1/4
1/8
℄
21/64 DIA
1/8 DIA

FIG. 10

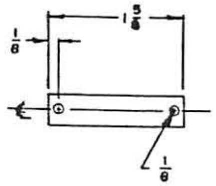
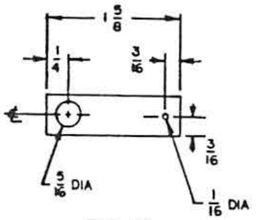


FIG. 11



1 5/8
1/4
3/16
℄
3/16
5/16 DIA
1/16 DIA

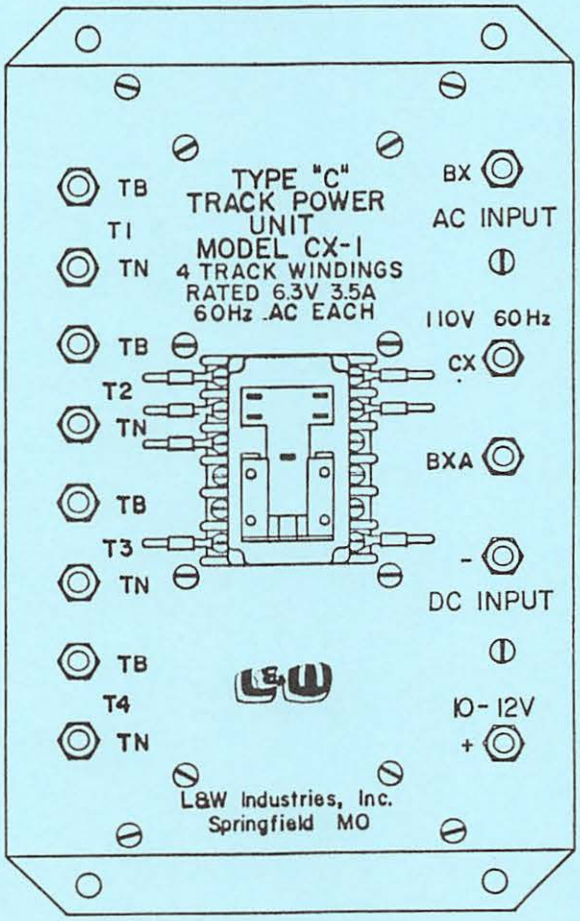
FIG. 12

TO ORDER: Specify description and ordering reference. To order a pre-varnished tag, add suffix "A" to P/N.

DESCRIPTION	ORDERING REFERENCE
FIG. 7, Black	L&W P/N 2029
Red	L&W P/N 2033
Gray	L&W P/N 2036
White Plastic	L&W P/N 2036-1
FIG. 8, Black	L&W P/N 2030
Red	L&W P/N 2031
Gray	L&W P/N 2032
White Plastic	L&W P/N 2032-1
FIG. 9, Black	L&W P/N 2034✓
Red	L&W P/N 2035
White Plastic	L&W P/N 2035-1

DESCRIPTION	ORDERING REFERENCE
FIG. 10, Black	L&W P/N 2020
Red	L&W P/N 2021
Gray	L&W P/N 2022
White Plastic	L&W P/N 2022-1
FIG. 11, Black	L&W P/N 2023
Red	L&W P/N 2024
Gray	L&W P/N 2025
White Plastic	L&W P/N 2025-1
FIG. 12, Black	L&W P/N 2065
Red	L&W P/N 2065-1
Gray	L&W P/N 2065-2
White Plastic	L&W P/N 2065-3

CX1
HIGHWAY CROSSING POWER PACK


TYPE "C"
TRACK POWER
UNIT
MODEL CX-1
4 TRACK WINDINGS
RATED 6.3V 3.5A
60Hz AC EACH
TB
T1
TN
TB
T2
TN
TB
T3
TN
TB
T4
TN
BX
AC INPUT
110V 60Hz
CX
BXA
-
DC INPUT
10-12V
+
L&W
L&W Industries, Inc.
Springfield MO

MAR, 1988

3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

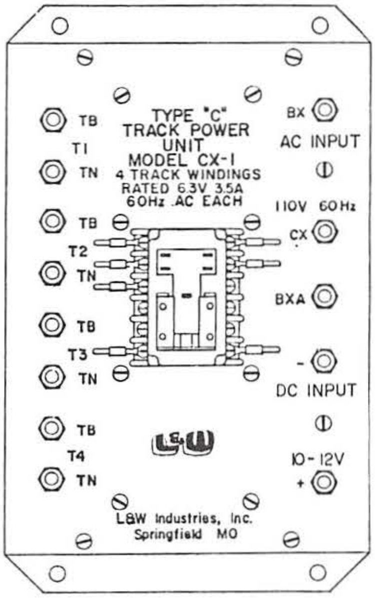
CX1 TYPE-C
HIGHWAY CROSSING
POWER PACK

The L&W CX1 Power pack was designed to provide power for four A.C.-D.C. track circuits. A.C.-D.C. track circuits, also referred to as Style "C" track circuits, have advantages which make them ideal for use at railroad-highway crossings in non-signaled territory and industrial environments. One advantage is that all power equipment, including batteries, can be located in one location. Another advantage is the improved shunting afforded by this type of track circuit. Normally the power for the track circuits is supplied from the commercial 110 volt, 60 HZ. A.C. source, stepped down to 6.3 volts by each of the four secondaries in the CX1 Power Pack. In the event of A.C. power failure, a power off relay transfers the supply for the transformer to an internal inverter which operates from a 10 to 12 volt battery. The amount of standby time is determined by the circuit load and the size of the battery. Each of the four secondaries has a capacity of 6.3 volts, 3.5 amperes. The solid state inverter has a capacity of 100 va.

Combined and wired into one unit are the components to perform the functions which normally require one or two transformers, a power off relay and an inverter. AAR terminals are provided and clearly marked for the four secondaries, the D.C. input and the A.C. input. A terminal also is provided for an inverter output. The combined load for transformer secondaries and this connection must not exceed the 100 va rating of the inverter.

There are no adjustments required for the CX1 Power Pack. Inspection should be made occasionally of the inverter by opening the A.C. input and checking that the track output voltage is not appreciably reduced. If it is reduced, be sure that battery voltage is no lower than 10 volts. If battery is above 10 volts and track output voltage is low, CX1 must be replaced and repaired.

CX1 POWER PACK

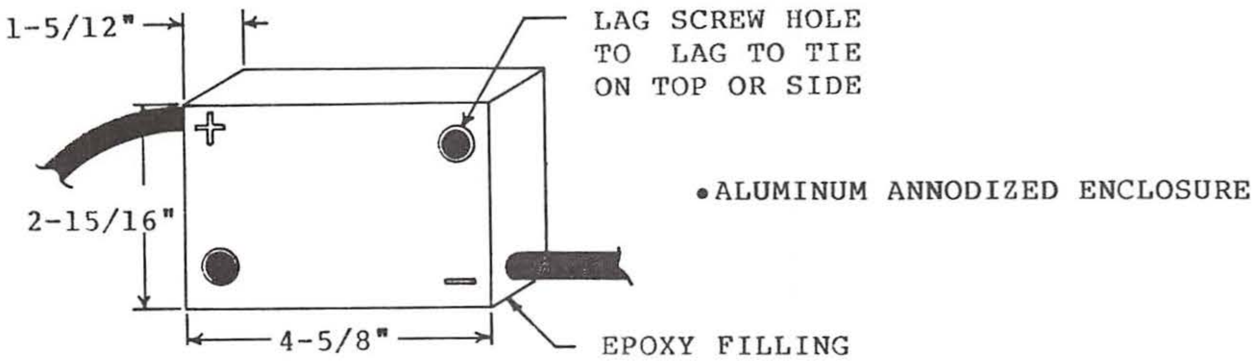

TYPE "C"
TRACK POWER
UNIT
MODEL CX-1
4 TRACK WINDINGS
RATED 6.3V 3.5A
60Hz AC EACH
TB
T1
TN
TB
T2
TN
TB
T3
TN
TB
T4
TN
BX
AC INPUT
110V 60Hz
CX
BXA
-
DC INPUT
10-12V
+
L&W
L&W Industries, Inc.
Springfield MO

- POWER TRANSFER RELAY
- SOLID STATE INVERTER

TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
CX1 Power Pack Unit	L&W P/N 2600-X

CX1 TRACK RECTIFIER

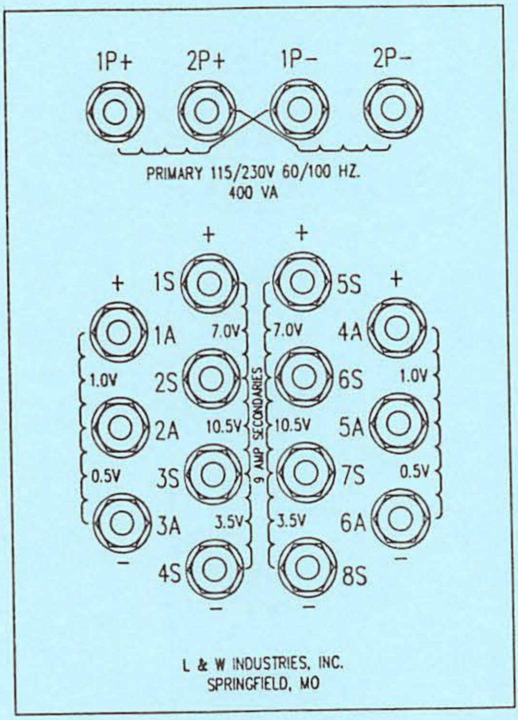

1-5/12"
LAG SCREW HOLE
TO LAG TO TIE
ON TOP OR SIDE
+
•ALUMINUM ANNODIZED ENCLOSURE
2-15/16"
−
4-5/8"
EPOXY FILLING

TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
CX1 TRACK RECTIFIER	L&W P/N 2610

L&W industries, inc. 14-B

LIGHTING TRANSFORMERS

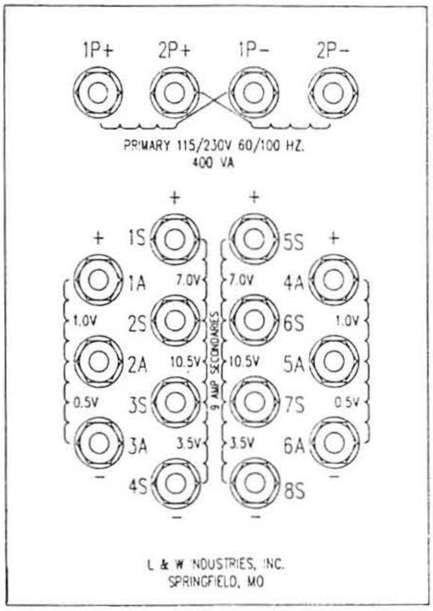

1P+
2P+
1P-
2P-
PRIMARY 115/230V 60/100 HZ.
400 VA
+
+
1S
5S
+
+
1A
7.0V
7.0V
4A
1.0V
2S
6S
1.0V
2A
10.5V
10.5V
5A
9 AMP SECONDARIES
0.5V
3S
7S
0.5V
3A
3.5V
3.5V
6A
-
-
4S
8S
-
-
L & W INDUSTRIES, INC.
SPRINGFIELD, MO

JUNE , 1988

3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

L&W industries, inc.

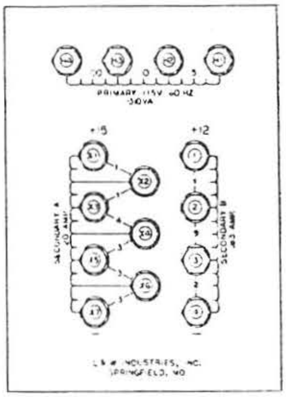
LIGHTING TRANSFORMERS


1P+
2P+
1P-
2P-
PRIMARY 115/230V 60/100 HZ.
400 VA
+
1S
5S
1A
2A
3A
2S
3S
4S
4A
5A
6A
6S
7S
8S
7.0V
10.5V
3.5V
1.0V
0.5V
9 AMP SECONDARIES
−
L & W INDUSTRIES, INC.
SPRINGFIELD, MO

L&W Lighting Transformers have been designed to be used for railroad-highway grade crossing and wayside signal lighting applications. All external wire connections are made on AAR Binding Posts, and meet all applicable AAR recommendations.

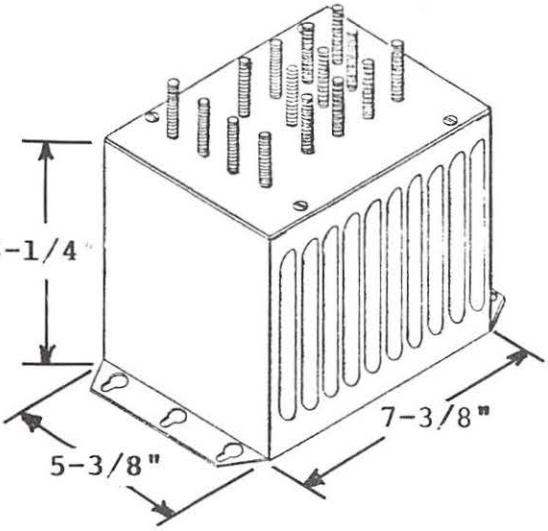
3143 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

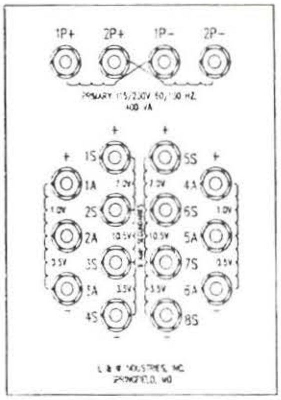
LIGHTING TRANSFORMERS


10
0
5
PRIMARY 115V 60 HZ
310VA
+15
+12
X1
X2
X3
X4
X5
X6
X7
1
4
3
9
2
SECONDARY A
20 AMP
SECONDARY B
.83 AMP
L & W INDUSTRIES, INC.
SPRINGFIELD, MO

2340-X

FIG. #1




1P+
2P+
1P-
2P-
PRIMARY 115/230V 50/60 HZ
400 VA
1S
2S
3S
4S
5S
6S
7S
8S
1A
2A
3A
4A
5A
6A
7.0V
1.0V
10.5V
3.5V
L & W INDUSTRIES, INC.
SPRINGFIELD, MO

2360-X

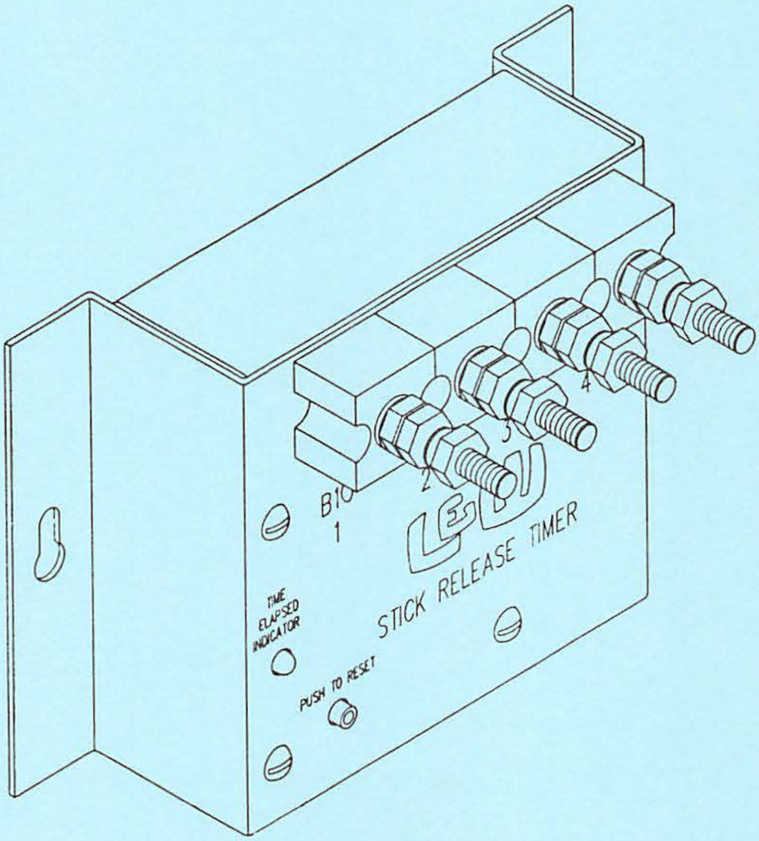
FIG. #2

TO ORDER: Specify description and ordering reference

DESCRIPTION						ORDERING REFERENCE
PRIMARY VOLTAGE	SECONDARY			TOTAL VOLT-AMPS (VA)	WIRING DIA. FIG.	
	NO. WINDINGS	VOLTS	AMPS			
115	2	15(1-1-4-3-3-3)	20	310	FIG. #1	L&W P/N 2340-X GRS 01-A95-410 TYPE U1
		12(1-9-2)	0.83			
230 OR 115	2	22.5(7-10.5-3.5-1.0-0.5)	9	400	FIG. #2	L&W P/N 2360-X UNION W10

L&W industries, inc. 14-D

STICK RELEASE TIMERS

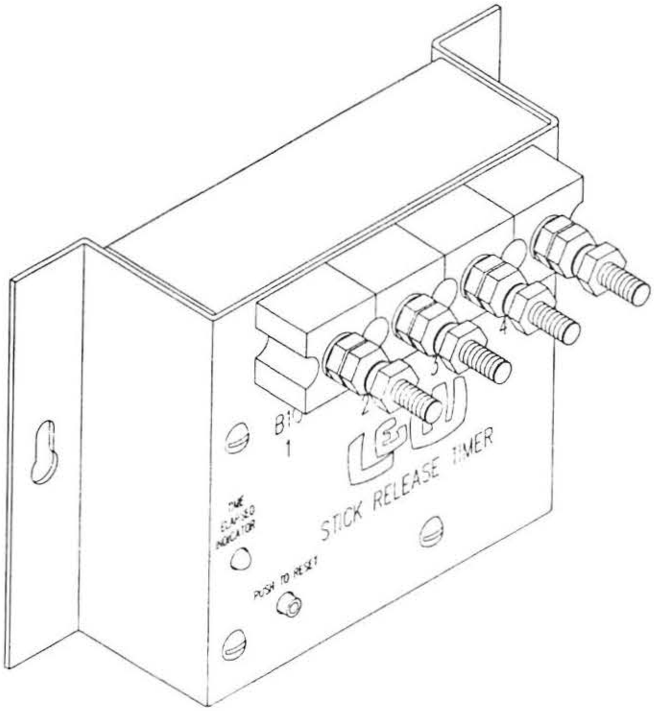

B10
1
2
3
4
L&W
STICK RELEASE TIMER
TIME ELAPSED INDICATOR
PUSH TO RESET

JAN, 1988

3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

SRT-1

STICK RELEASE TIMER



The L&W SRT-1 Stick Release Timer is an electronic timer designed to be used with railroad-highway grade crossing warning systems utilizing directional stick relay logic. The SRT-1 Stick Release Timer is factory set and tested for a time period of 20 min. The SRT-1 Stick Timer can be set for other time periods between 2 and 33 mins. by means of a programmable time switch located on the circuit board. Upon completion of the time period a LED indicator will light and remain lit to indicate a complete time period has elapsed. A pushbutton allows the LED indicator to be extinguished. Operation of the LED or pushbutton in no way affects the timing function of the SRT-1 Stick Release Timer. Should the directional stick relay release before the timer period elapses the LED will not illuminate.

L&W industries, inc.

SRT-1 STICK RELEASE TIMER

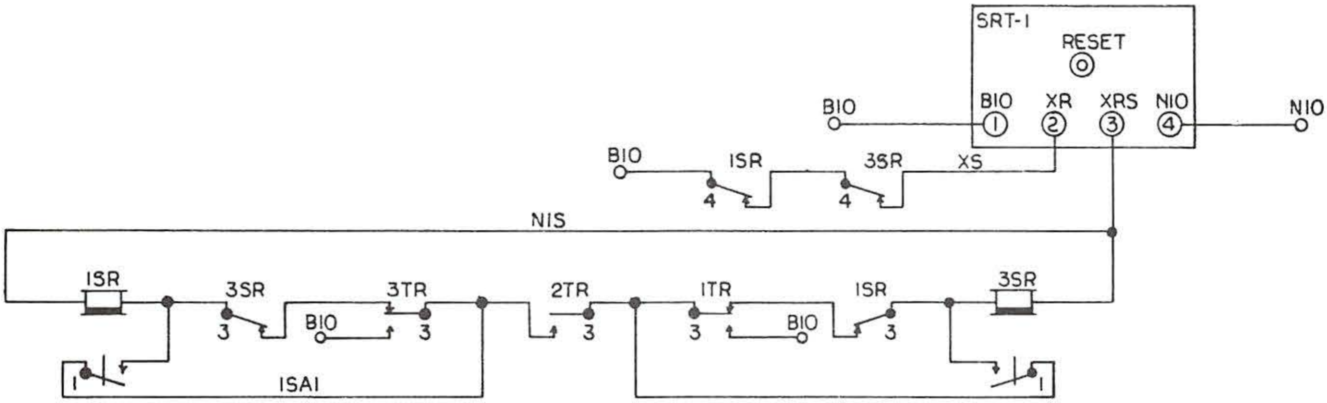
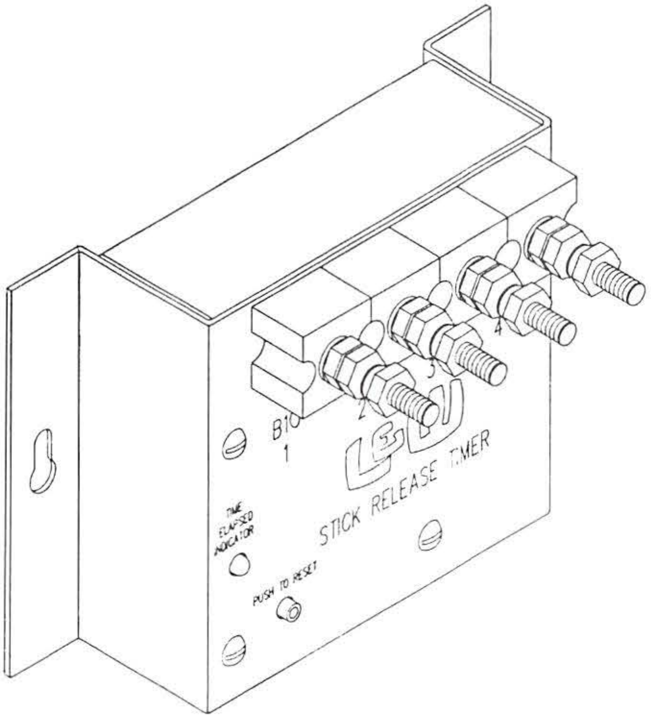

SRT-1
RESET
B10
XR
XRS
N10
①
②
③
④
B10
N10
B10
1SR
3SR
XS
4
4
N1S
1SR
3SR
3TR
B10
3
3
2TR
3
1TR
3
B10
1SR
3
3SR
1
ISA1
1

FIGURE NO. 1

OPERATION

The L&W SRT-1 Stick Release Timer when installed as shown in figure No. 1 will begin timing as soon as either directional stick relay is energized. If the directional stick relay fails to release after the programmed time period has elapsed the SRT-1 will deenergize the directional stick relay by removing N10 energy from the "XRS" terminal, putting the railroad-highway grade crossing warning system into continuous operation. An LED will light and remain lit until the reset button is pushed. Release of the directional stick relay will put B10 onto the "XR" terminal resetting the timer. Even with the LED lit the SRT-1 timer will continue to run time for each directional stick operation.

SRT-1
STICK RELEASE TIMER


B10
1
2
3
4
L&W
STICK RELEASE TIMER
TIME ELAPSED INDICATOR
PUSH TO RESET

- SOLID STATE DESIGN
- FACTORY SET TIME
- TIME RANGE OF 2 TO 33 MINUTES
- TIME ELAPSED INDICATOR
- INDICATOR RESET BUTTON

TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
SRT-1 Stick Release Timer, set for 30 minutes	L&W P/N 2560-30X
SRT-1 Stick Release Timer, set for 20 minutes	L&W P/N 2560-20X
SRT-1 Stick Release Timer, set for 10 minutes	L&W P/N 2560-10X

TIMING TABLE

The SRT-1 Stick Release time period is field programmable through a selectable program switch located inside the box. The desired time period can be selected by positioning the programing switches as shown in FIG. 2.

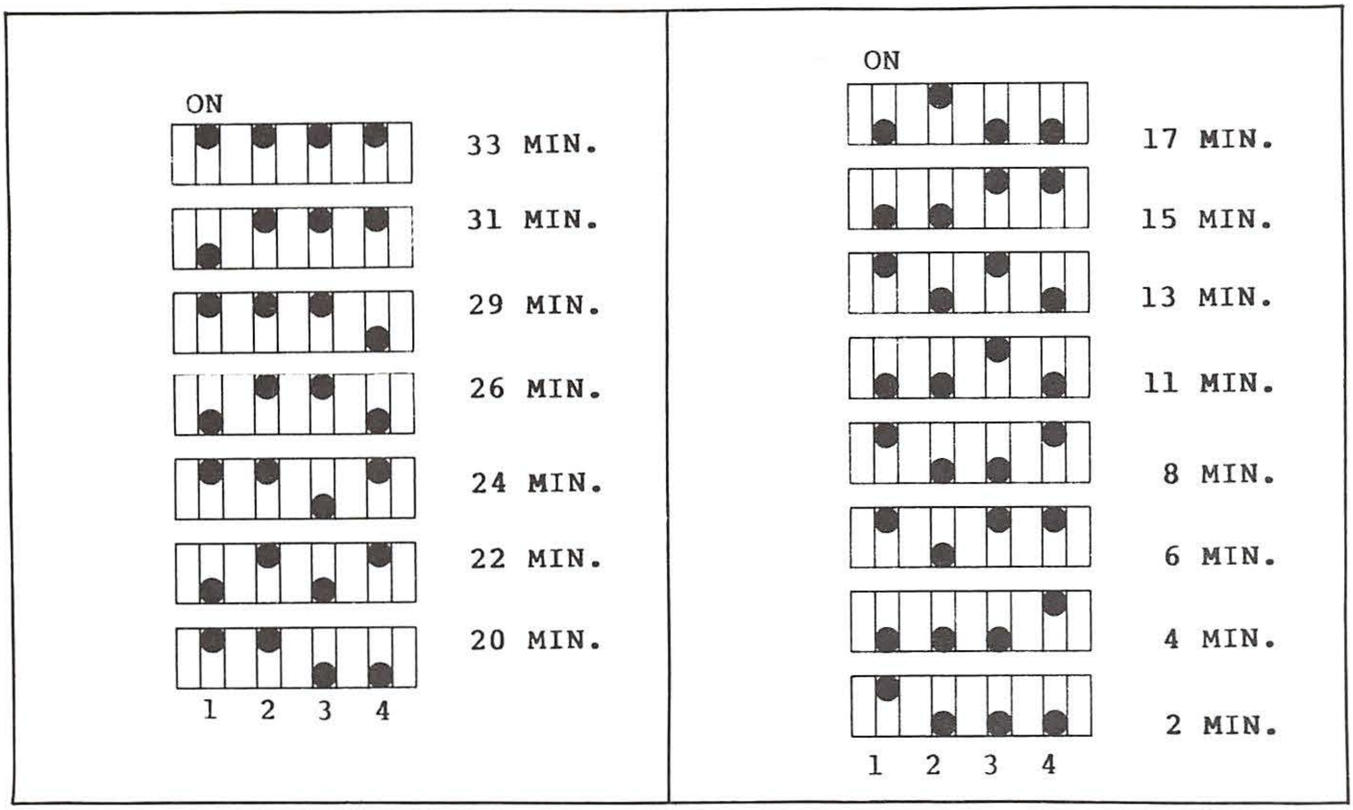

ON
33 MIN.
31 MIN.
29 MIN.
26 MIN.
24 MIN.
22 MIN.
20 MIN.
1 2 3 4
ON
17 MIN.
15 MIN.
13 MIN.
11 MIN.
8 MIN.
6 MIN.
4 MIN.
2 MIN.
1 2 3 4

FIGURE NO. 2

L&W industries, inc.
3149 E. Chestnut Expressway • Springfield, MO 65802 • (417) 864-5411

SERVICE

L & W Industries has recently built an extensive warehouse facility in Springfield, Missouri. Now, hundreds of parts and assemblies can be in stock for immediate shipment. We will work our deliveries to meet your demands!

QUALITY

Our manufacturing equipment, and experienced personnel along with assured quality control procedures help to keep our customers satisfied.

COMMITMENT

L & W Industries would like to be considered an extension of your own personnel. This is how close we can work with your signal requirements. We are ready to provide you:

Engineering and Design
Materials/Systems
Installation
Maintenance
or just replacement parts.

We understand our responsibility to the Railroad Signal Industry, and will continue to progress.

PRICE

We are certain that we are competitive with quality competitors, and certain that you will find this to be true of our organization. Initial investment as well as long term savings built into the design and quality of the products.

CALL US FIRST! any time you require the following signal equipment:

- Highway Crossing Signal Assemblies
    - Gates
    - Cantilevers
    - Flashers
- Wayside Signal Assemblies
    - Colorlight Signals
    - Mast, Ladder and Base Assemblies
- Track Material
    - Compression Sleeves
    - Bonding Bits
    - Terminal Box Assemblies
- Equipment Housings
    - Pole Mount Cases
    - 31 Inch thru 116 Inch Cases
    - 4 foot x 6 foot to 8 foot x 30 foot Houses
- Electro-Mechanical Materials
    - Transformers, Lighting or Line
    - Rectifiers, Batteries
    - Wiring Materials
    - Resistors, etc.
- Remanufacturing to Original Specifications
    - Switch Machines
    - Relays
    - Circuit Controls
- Or any other related signal products.

L & W Industries will be a useful supplier to your company. We look forward to working with your company.

CALL US FIRST!

L&W

INDUSTRIES, INC.

SPRINGFIELD MISSOURI

1-800-U KALL US

L&W industries, inc.

CAD/CAE

To better serve our customers we have made a strong committment to computer aided design. By placing computers directly into the hands of our engineers we have significantly improved our design productivity.

Our computerized drafting and design group is capable of providing CAD/CAE services using Microstation software running on an Intergraph Interpro-32 computer, or Autocad software running on MS-DOS computers. These hardware - software combinations allow us to provide both IGDS and IGES compatibility, meaning that all drawing files, cell libraries, menus, and etc. will run on Interact, Interview, and any VAX/VMS or MS-DOS based computer system.

With this high level of computer compatibility, in combination with a knowledgable staff, we can offer the railroad industry efficient digitization of signal circuit plans at competitive cost. We can take your existing circuit plans transfer them into the computer and then return them to you on a magnetic medium of your choice compatible with your own computer, or we can network with your computer allowing us to become part of your own computer system. All this allows L&W Inds., Inc. the flexibility to meet your CAD/CAE service requirements.

We have both the signal circuit design and computer systems knowledge to successfully complete any signal CAD/CAE project.

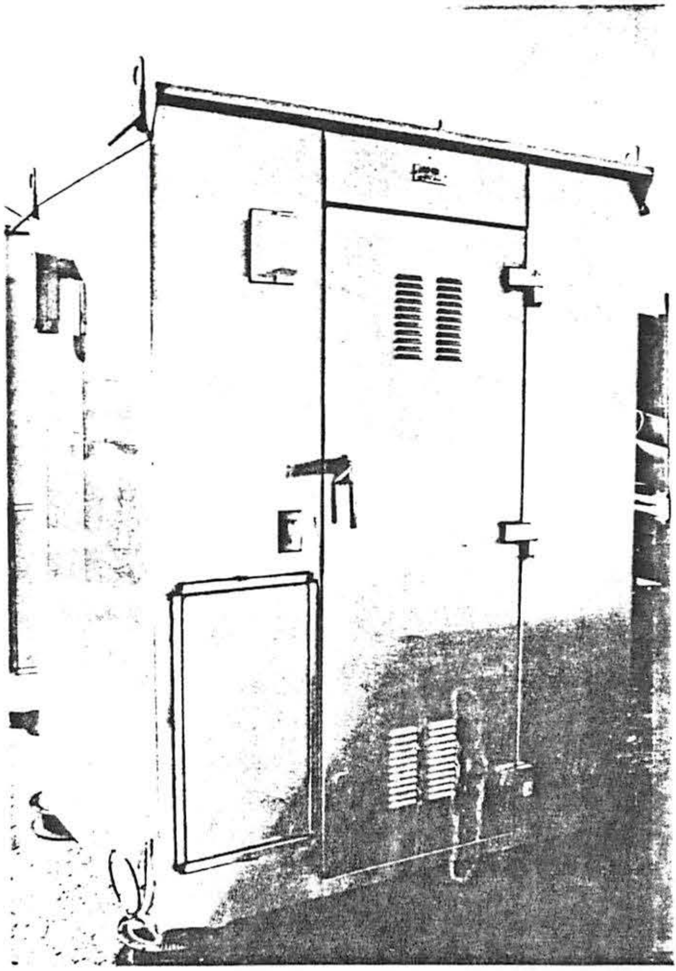
L & W industries, inc.

1-800-U KALL US

Microstation is a registered trademark of Bentley Systems
Intergraph, Interpro, Interact, Interview, & IGDS are registered trade marks of Intergraph, Inc.
VAX/VMS is a registered trademark of Digital Equipment Corp.
Autocad is a registered trademark of Autodesk, Inc.
MS-DOS is a registered trademark of Microsoft, Inc.

INSTRUMENT
HOUSES & CASES

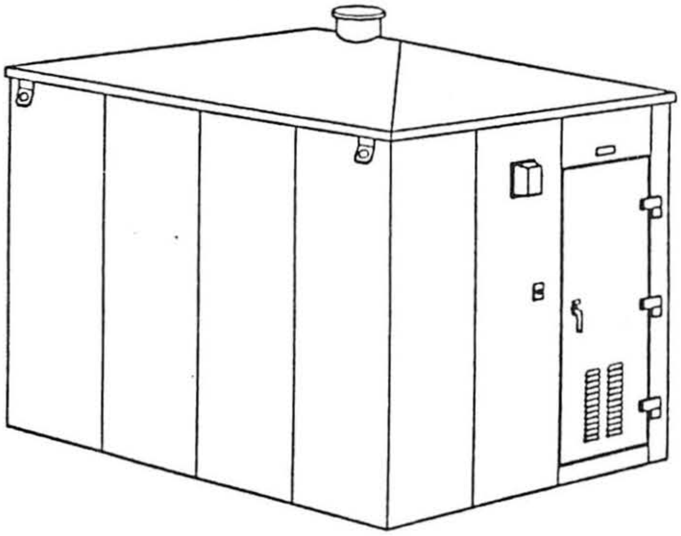
ALUMINUM, STEEL & CORTEN STEEL



INSTRUMENT HOUSE

L & W Instrument Bungalows are manufactured either from aluminum, steel, or COR-TEN. Standard features are as follows:

- Screened Door Air Vents
- Lifting Eyes or Pipe
- Padlockable Door Handles
- Fully Gasketed Doors
- Wireways
- Keyways
- Tie Downs
- 3-Point Door Latching
- Greaseable Hinges
- Aerial Case Knockouts
- U.G. Cable Knockouts
- Plywood Flooring
- Screened Floor Vents



Ordering References
See Following Pages for Options and How to Order

	Part Number		
Size	Aluminum	Steel	COR-TEN
3 X 4	LW 0230400XA	LW 0230400XS	LW 0230400XC
4 X 6	LW 0240600XA	LW 0240600XS	LW 0240600XC
6 X 6	LW 0260600XA	LW 0260600XS	LW 0260600XC
6 X 8	LW 0260800XA	LW 0260800XS	LW 0260800XC
8 X 8	LW 0280800XA	LW 0280800XS	LW 0280800XC
8 X 10	LW 0281000XA	LW 0281000XS	LW 0281000XC
8 X 12	LW 0281200XA	LW 0281200XS	LW 0281200XC
8 X 14	LW 0281400XA	LW 0281400XS	LW 0281400XC
8 X 16	LW 0282000XA	LW 0282000XS	LW 0282000XC
8 X 20	LW 0210200XA	LW 0210200XS	LW 0210200XC
10 X 20	LW 0230400XA	LW 0230400XS	LW 0230400XC

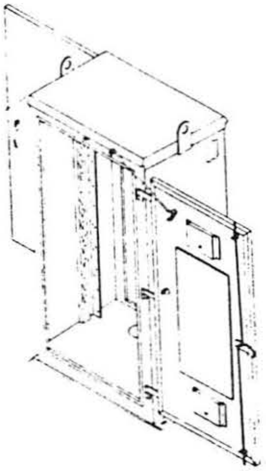
INSTRUMENT HOUSE - OPTIONS

Option No.	Description	L&W Part No.
1	Heater for 3 x 4, 4 x 6, 6 x 6, 6 X 8	LW 70226
2	Heater for 8 x 8 through 8 x 20	LW 70229
3	Vent Fan & Thermostat	LW 51235-X
4	Vent Fan	LW 51235-3
5	Wall Mount Fan	LW 70304
6	Thermostat	LW 51238
7	Full Relay Rack (Fixed 19"), (23" also available)	LW 53700-X
8	Full Swing Rack - 19"	LW 53714-X
9	1/2 Swing Rack - 19"	LW 53134-X
10	Open Rack for Harmon Rack	Specify
11	Terminal Board x x x	Specify
12	Terminal Board x x x	Specify
13	Terminal Board x x x	Specify
14	1" Insulation	Specify
15	2" Insulation	Specify
16	Shelves (specify how many)	Specify
17	Floor Matting (4' wide, specify length or house size)	LW 53090
18	Drop Down Foundation (48" or 72" long)	Specify
19	A/C (115 VAC, 5000 BTU, others available)	LW 70340
20	Mounting Boards	Specify
21	Incandescent Lighting	LW 70390
22	Flourescent Lighting	Specify
23	Battery Trays	Specify
24	Aerial Vent	LW 51005-X1
25	Ceiling Fan	Specify
26	Underground Cable Bushing (3" to 4")	LW 50109
27	Power Off Indicator	LW 2953030-X
28	Breaker Box	Specify Square D Type
29	Duplex Outlet - GFI Protected	Specify
30	Grounding Package - Welded	Specify
31	Grounding Studs	Specify
32	Cable Risers	Specify

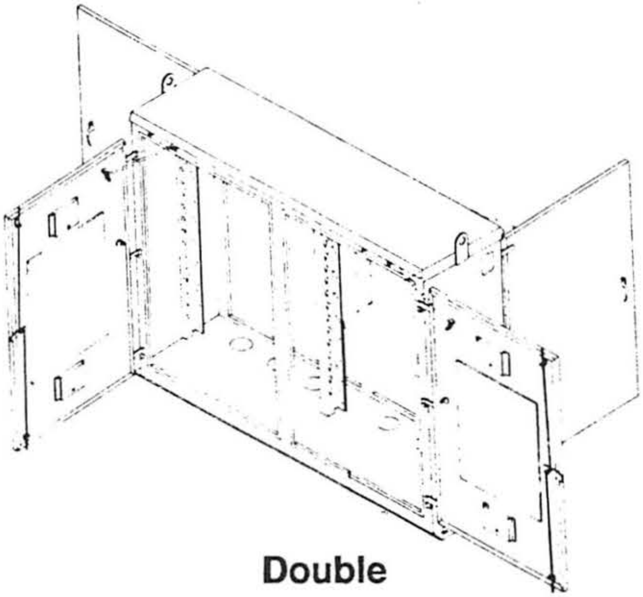
INSTRUMENT CASES

L & W Instrument Cases are manufactured either from aluminum, steel, or COR-TEN. Standard features are as follows:

- Screened Door Air Vents
- Lifting Eyes or Pipe
- Padlockable Door Handles
- Fully Gasketed Doors
- 3-Point Door Latching
- Greasable Hinges
- Aerial Case Knockouts
- U.G. Cable Knockouts



Single



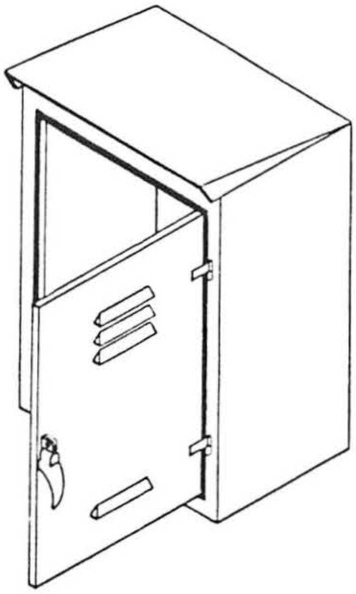
Double

Ordering References
See Following Pages for Options and How to Order

		L&W Part No.		
Size	Bolt Spacing	Aluminum	Steel	COR-TEN
31" Low		LW 0131000XA	LW 0131000XS	LW 0131000XC
31" High		LW 01310100XA	LW 01310100XS	LW 01310100XC
41" Low		LW 0141000XA	LW 0141000XS	LW 0141000XC
41" High		LW 01410100XA	LW 01410100XS	LW 01410100XC
60" Low		LW 0160000XA	LW 0160000XS	LW 0160000XC
60" High		LW 0160100XA	LW 0160100XS	LW 0160100XC
81" Low		LW 0181000XA	LW 0181000XS	LW 0181000-XC
81" High		LW 01810100XA	LW 01810100XS	LW 01810100XC
116"		LW 01116000XA	LW 01116000XS	LW 01116000-XC

WALL OR POLE MOUNT CASES

L & W Pole Cases are manufactured from aluminum or steel. All L & W Pole Cases have screened air vents, aerial cable inlet knockout, fully gasketed doors and are padlockable. L & W provides a wide variety of optional accessories and internal equipment configurations.

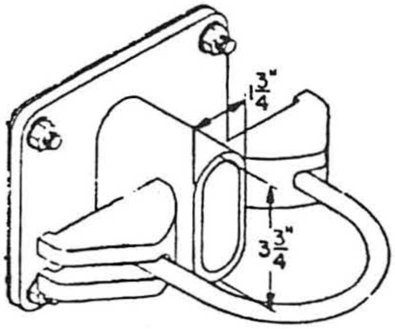


Ordering References

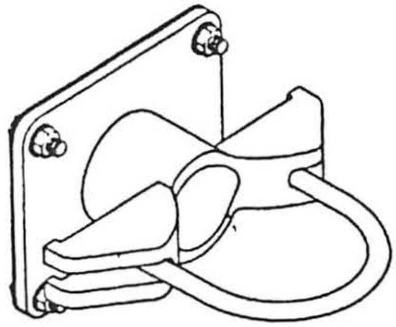
	Part Number	
Size	**Aluminum**	**Steel**
51 1/2" H x 28 1/4" W x 13 1/8" D	LW 01240100XA	LW 01240100XS
39 3/4" H x 23 3/4" W x 13 1/8" D	LW 01230100XA	LW 01230100XS
39 3/4" H x 15 3/4" W x 13 1/8"	LW 01220100XA	LW 01220100XS
28" H x 13 3/4" W x 13 1/8" D	LW 01210100XA	LW 01210100XS

POLE CASE MOUNTING BRACKET

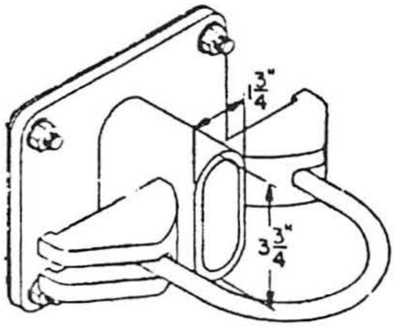
L & W Pole Case Mounting Brackets are manufactured from cast aluminum and come with yellow zinc or stainless steel hardware. They are designed to mount to 2" x 4" slots.



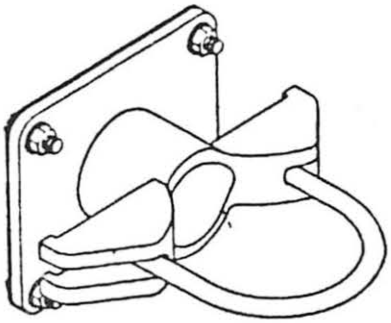
LW 50070-X
4" Bracket, Mounting, Cast Aluminum
with 2" x 4" Cable Entrance
w/Mtg. Hdw



LW 50075-X
4" Bracket, Mounting, Cast Aluminum
without Integral Cable Entrance
w/Mtg. Hdw



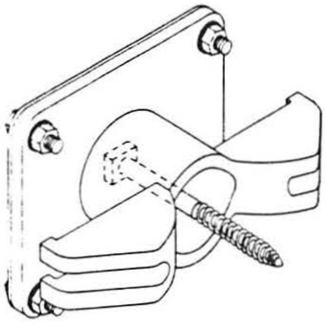
LW 50070-1X
5" Bracket, Mounting, Cast Aluminum
with 2" x 4" Cable Entrance
w/Mtg. Hdw



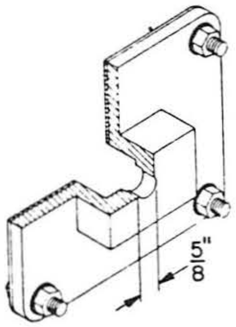
LW 50075-1X
4" Bracket, Mounting, Cast Aluminum
without Integral Cable Entrance
w/Mtg. Hdw

POLE CASE MOUNTING BRACKET

L & W Pole Case Mounting Brackets are manufactured from cast aluminum and come with yellow zinc or stainless steel hardware. They are designed to mount to 2" x 4" slots.



LW 50070-X
4" Bracket, Mounting, Cast Aluminum
with 2" x 4" Cable Entrance
w/Mtg. Hdw

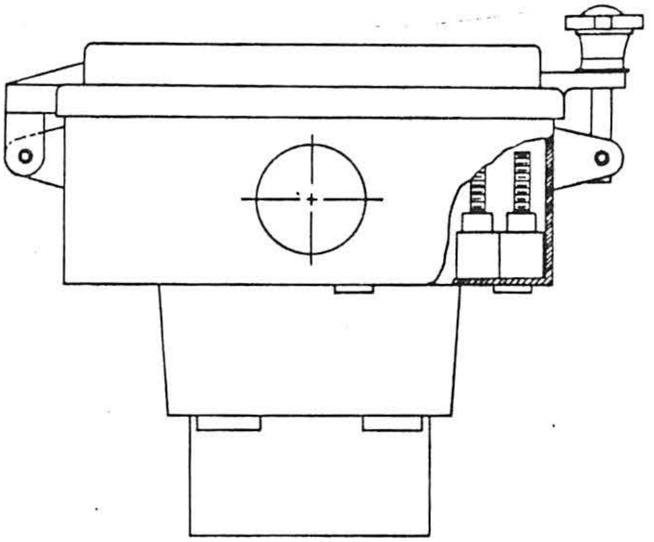


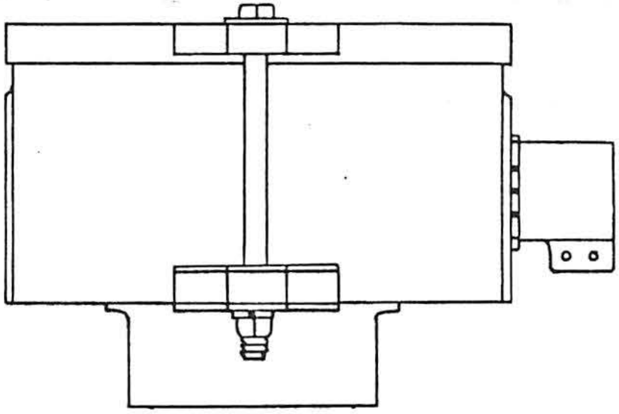
LW 50075-X
4" Bracket, Mounting, Cast Aluminum
without Integral Cable Entrance
w/Mtg. Hdw

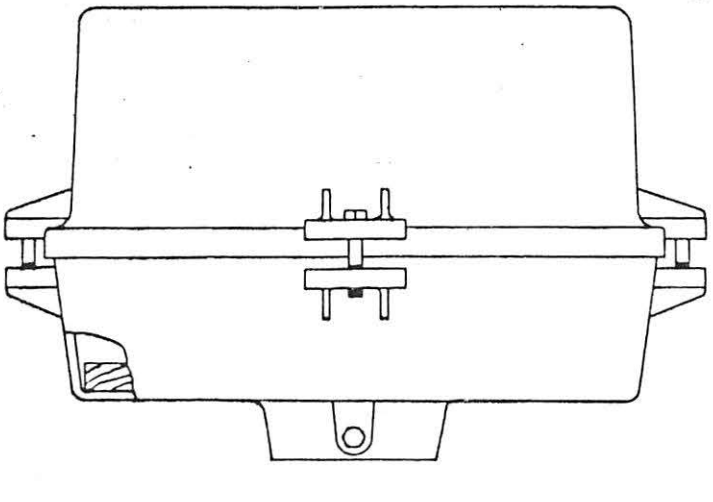
LW 50070-1X
5" Bracket, Mounting, Cast Aluminum
with 2" x 4" Cable Entrance
w/Mtg. Hdw

LW 50075-1X
4" Bracket, Mounting, Cast Aluminum
without Integral Cable Entrance
w/Mtg. Hdw

PEDESTAL BOXES







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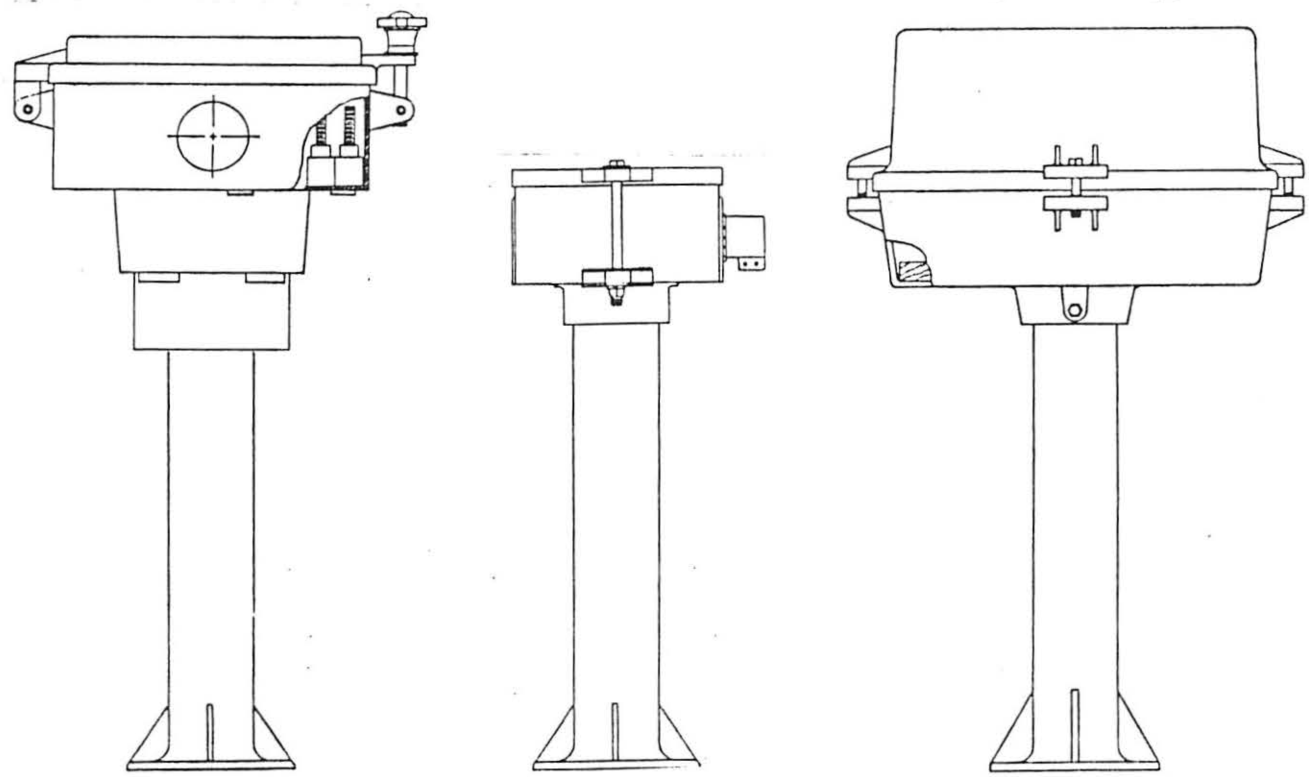
PEDESTAL BOXES



L&W Pedestal Boxes are manufactured from cast aluminum , have screened air vents, are fully gasketed, padlockable, and do not require painting. L&W provides a wide variety of optional accessories and internal equipment configurations.

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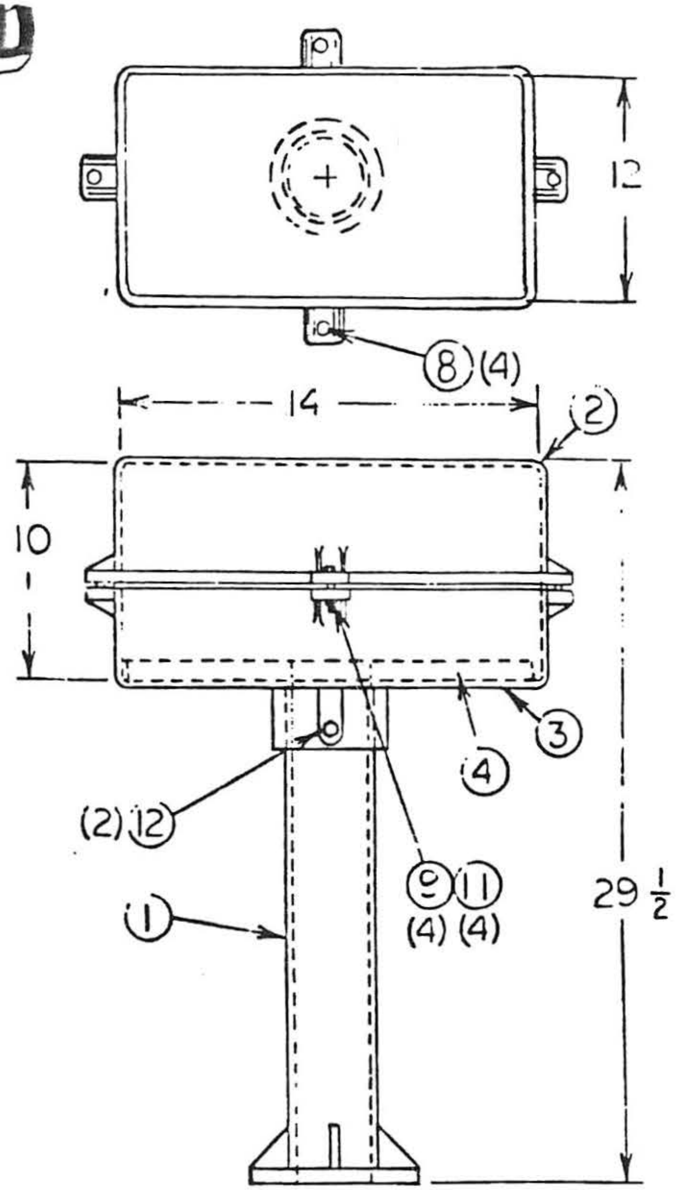
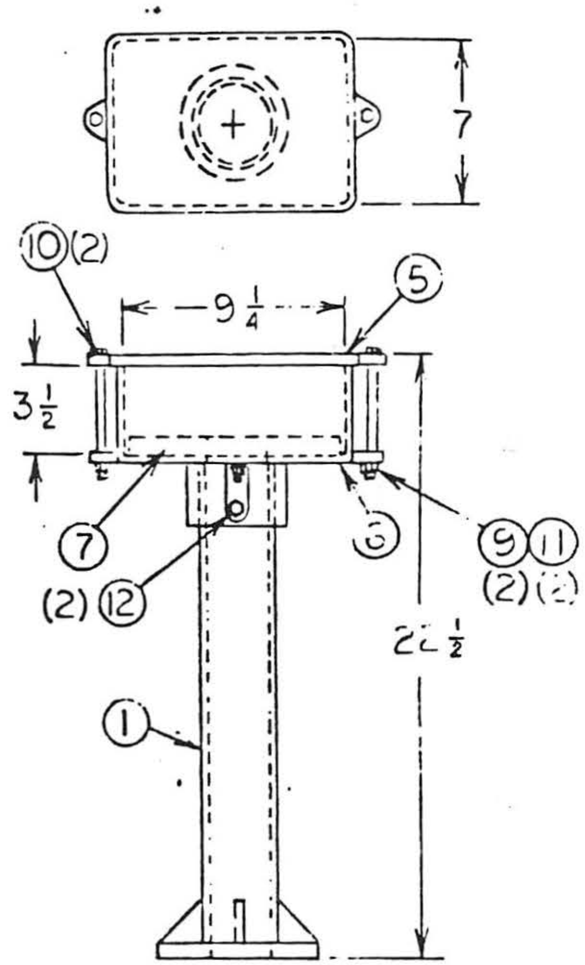
PEDESTAL TERMINAL BOXES


12
8 (4)
14
2
10
29 1/2
3
4
(2) 12
9 11
(4) (4)
1

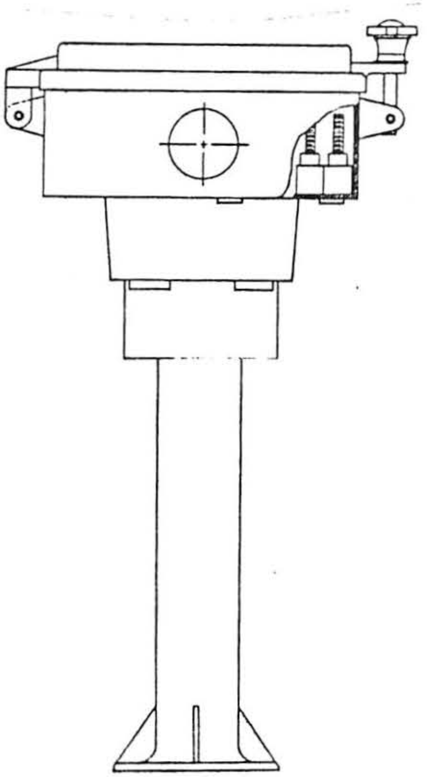
Nº 7000-X
COMPLETE 14×12×10 BOX

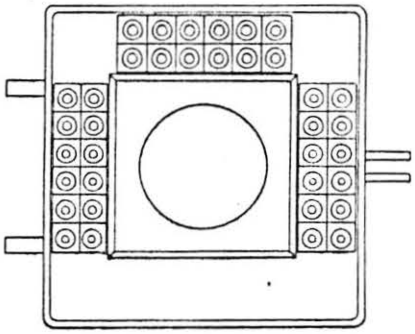

7
10 (2)
9 1/4
5
3 1/2
7
6
9 11
(2) (2)
(2) 12
22 1/2
1

Nº 7100-X
COMPLETE 9¼×7×3½ BOX

KEY	QTY.	PART Nº	DESCRIPTION
1	1 ea.	7001	PEDESTAL
2	1	7002	COVER 14×12
3	1	7003	BASE 14×12
4	1	7004	MTG. BASE (PLYWOOD)
5	1	7101	COVER 9½×7
6	1	7102	BASE 9½×7
7	1	7103	MTG. BASE (PLYWOOD)
8		REF. A	HEX BOLT
9		REF. B	HEX NUT
10		REF. C	HEX BOLT
11		REF. D	LOCKWASHER
12		REF. E	SET SCREW

7005 SERIES
PEDESTAL BOX

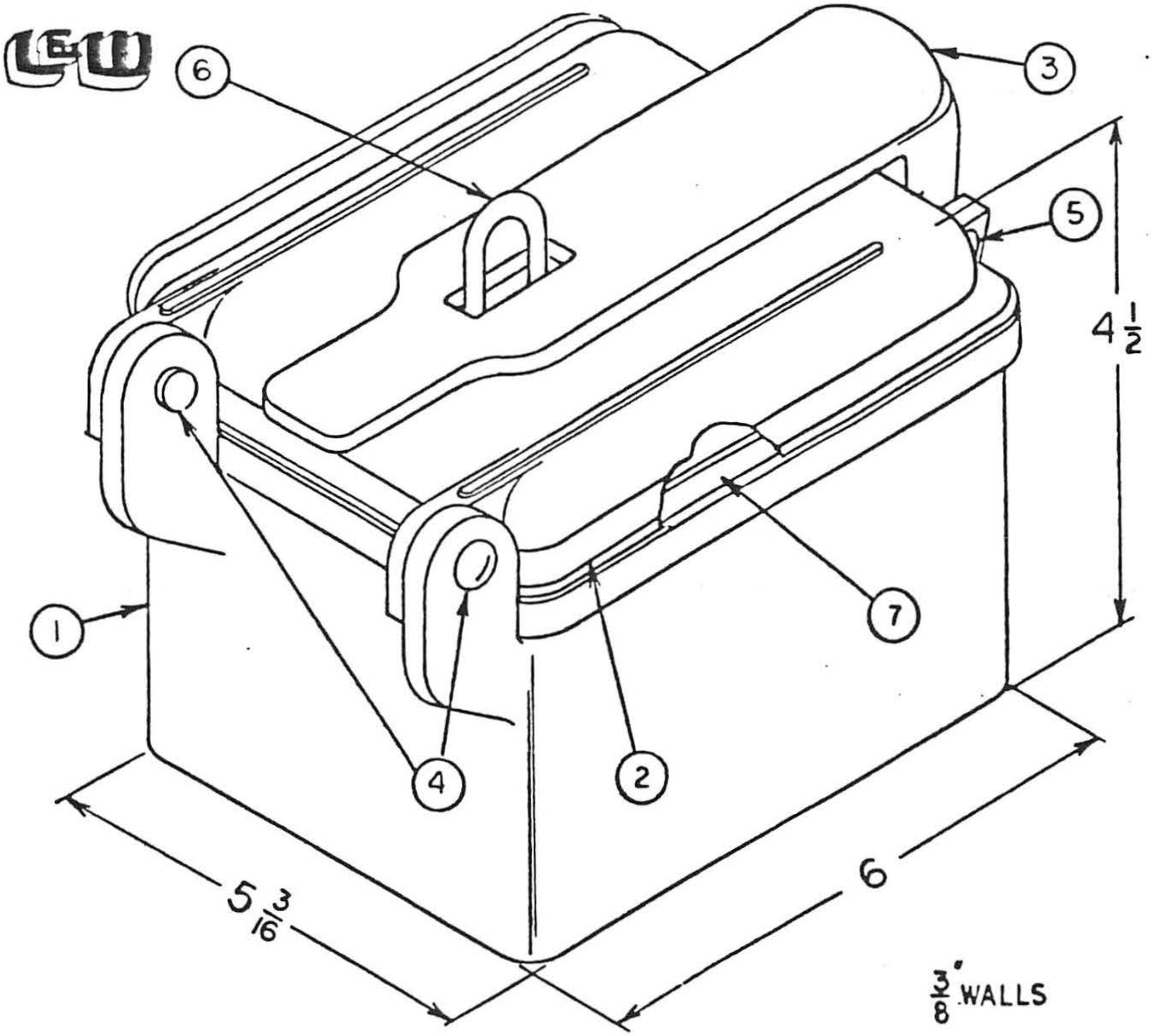




- CAST ALUMINUM
- SCREENED AIR VENTS
- GASKETED COVERS
- PADLOCKABLE

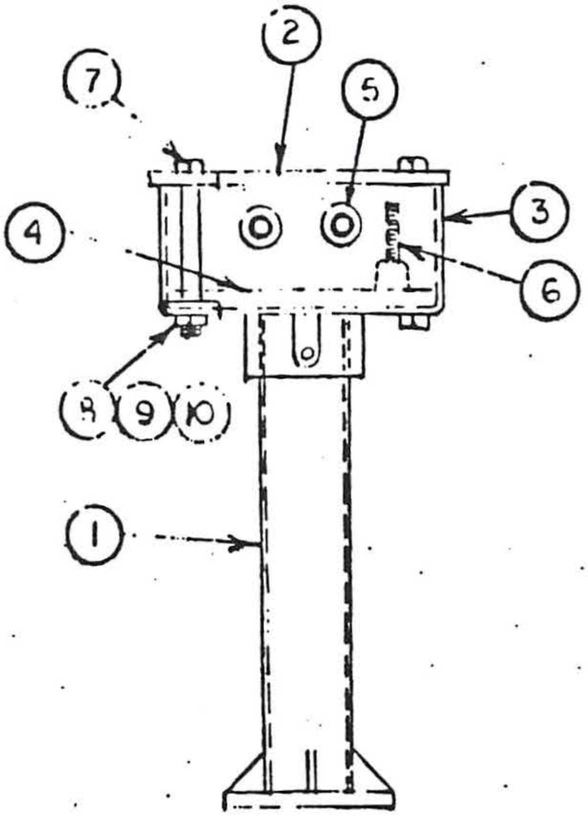
TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
Complete Junction Terminal Box Assembly 12-1/14" x 12-1/4".	L&W P/N 7005-X


1
2
3
4
5
6
7
4 1/2
5 3/16
6
3/8" WALLS

8000-X
CONTROL BOX
(WATERPROOF)

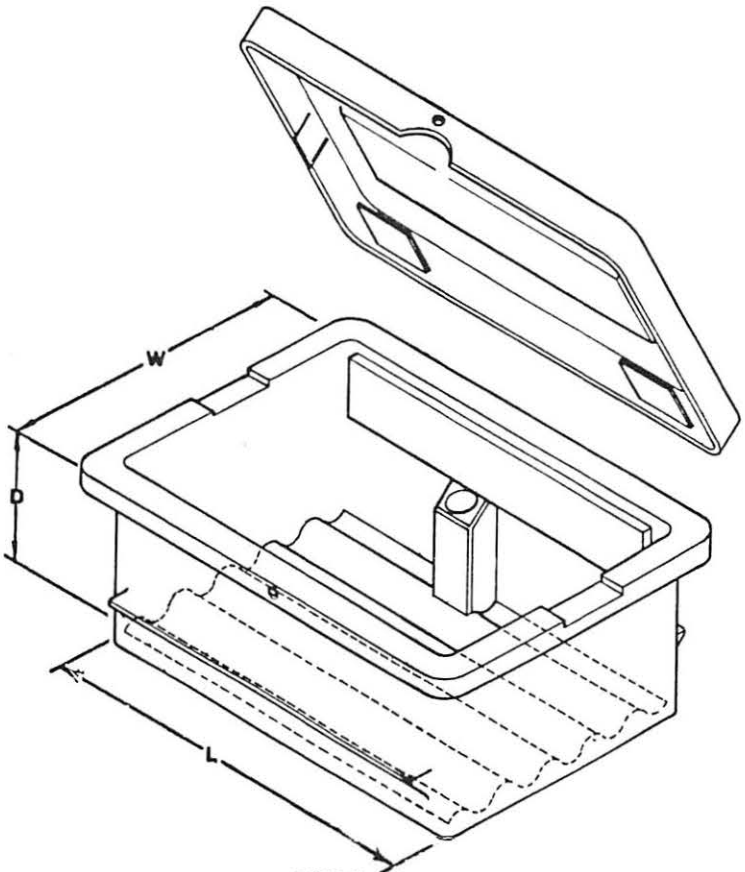
KEY	AMT	PART Nº	DESCRIPTION
1	1	8001	BOX
2	1	8002	COVER
3	1	8003	HANDLE
4	2	8004	HINGE PIN
5	1	8005	HANDLE PIN
6	1	8006	LOCK LUG
7	1	8007	GASKET



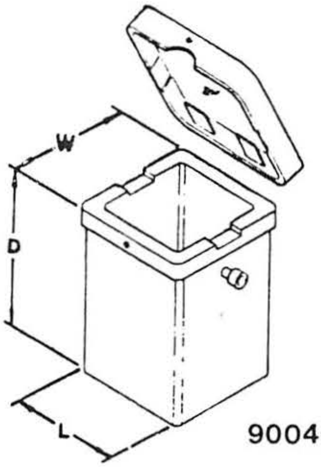
PARKWAY BOOTLEG
1721-X

ITEM	QTY	PART Nº	DESCRIPTION
1	1	7001	PEDESTAL
2	1	7201	COVER, PEDESTAL
3	1	7202-3	BASE, PEDESTAL
4	1	7203	3/4" PLYWOOD
5	2	1009	CABLE ENTRANCE FITTING
6	2	32197-2	TERMINAL (1 GANG)
7	2		3/8-16 X 5 1/2" HEX HEAD BOLT
8	2		3/8" HEX NUT
9	2		3/8" FLATWASHER
10	2		3/8" LOCKWASHER

FIBERGLASS BATTERY BOXES



9006-X



9004-X

- ACID RESISTANT FIBERGLASS
- 2-1/2" DIA. INTEGRAL CABLE ENTRANCE OPENING
- ANTI-FLOTATION FLANGES
- WOOD TERMINAL BOARD
- LOCKABLE
- VENTILATED

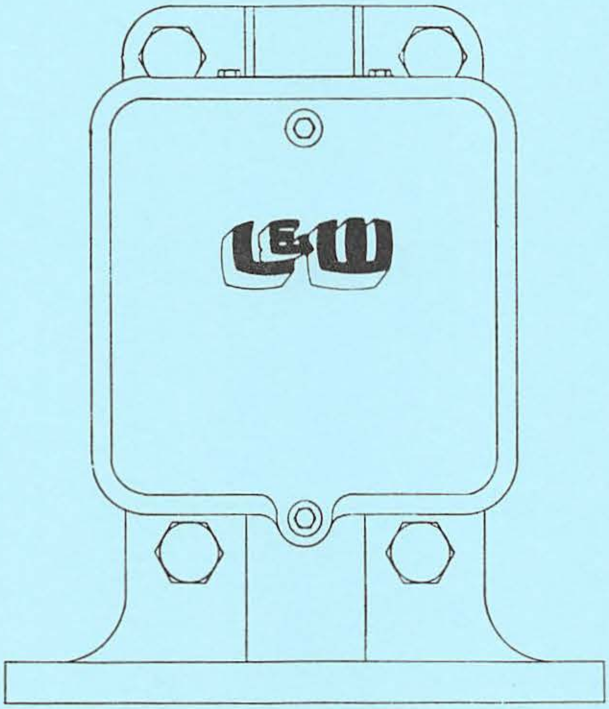
The L&W 9006-X Fiberglass Battery Box is molded from acid resistant fiberglass with a reinforced fiberglass lid. The L&W 9006-X Fiberglass battery Box has anti-flotation flanges, integral cable entrance, wood terminal boards, ventilation and is lockable.

TO ORDER: Specify description and ordering reference.
Dimensions D,L, and W are inside diminsions

DESCRIPTION	ORDERING REFERENCE
Fiberglass Battery Box with lid for single cell battery D=13-1/2", L=7-1/2", W=7-1/2"	L&W P/N 9004-X
Fiberglass Battery Box with lid for multi-cell batteries **D=21", L=26", W=20"**	L&W P/N 9006-X

L&W industries, inc. 4-A

SIGNAL BASES



JAN, 1988

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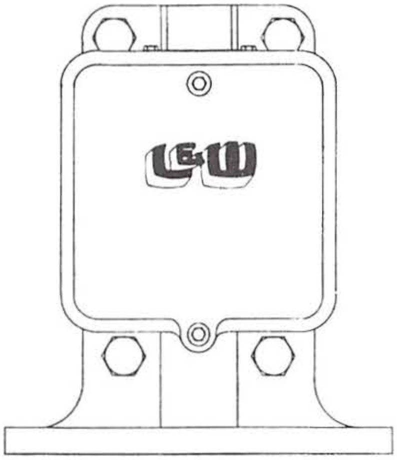
L&W industries, inc.

SIGNAL BASES
FOR
3-4&5 INCH MASTS



L&W Cast Signal Bases are available in different configurations such as, Split, Single Junction Box and Double Junction box. Where required they are supplied with AAR terminal posts and rodent plate. Available in aluminum and cast iron. All bolt holes are slotted for easy installation.

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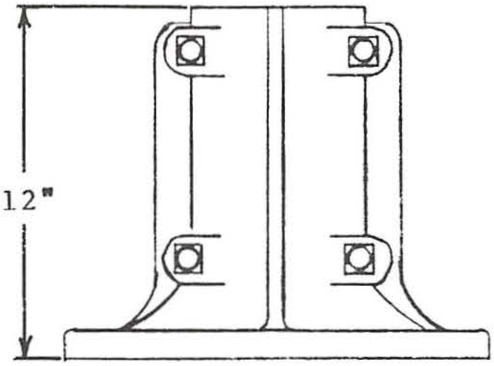
4 INCH SPLIT BASES

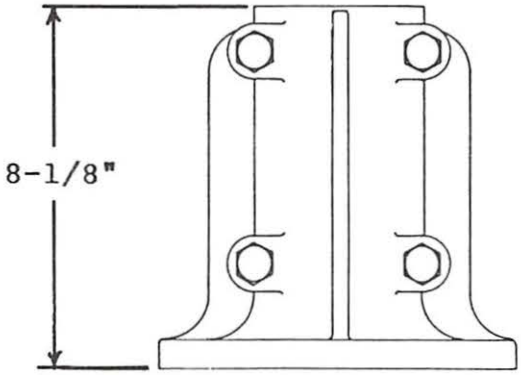


TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
4" Aluminum Split Base 9-1/2" X 9-1/2" Bolt Spacing with hardware.	L&W P/N 5710-X
4" Aluminum Split Base 11-11/16" X 11-11/16" Bolt Spacing with hardware.	L&W P/N 5810-X

DESCRIPTION	ORDERING REFERENCE
4" Cast Iron Split Base 9-1/2" x 9-1/2" Bolt Spacing with hardware.	L&W P/N 5710-XFE
4" Cast Iron Split Base 11-11/16" x 11-11/16" Bolt Spacing with hardware.	L&W P/N 5810-XFE

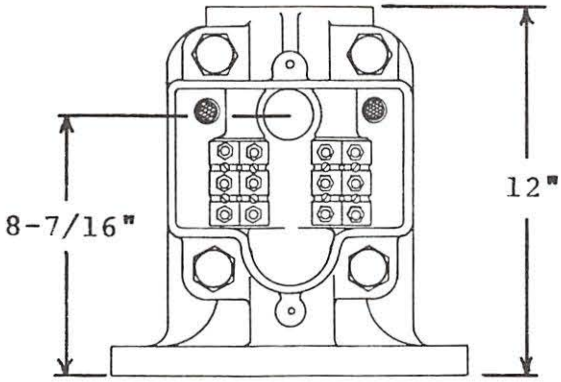
3 INCH SPLIT BASES



TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
3" Aluminum Split Base 9-1/2" x 9-1/2" Bolt Spacing with hardware.	L&W P/N 5650-X
3" Cast Iron Split Base 9-1/2" x 9-1/2" Bolt Spacing with hardware.	L&W P/N 5650-XFE

4 INCH SINGLE & DOUBLE JUNCTION BOX BASES

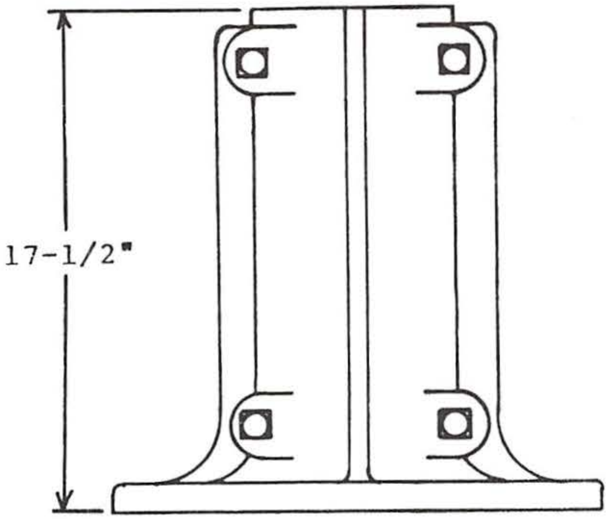


TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
4" Aluminum Single Junction Box Base 9-1/2" X 9-1/2" Bolt Spacing with 12 AAR Terminals w/Hardware.	L&W P/N 5700-X
4" Aluminum Single Junction Box Base 11-11/16" X 11-11/16" Bolt Spacing with 12 AAR Terminals w/Hardware.	L&W P/N 5800-X
4" Aluminum Double Junction Box Base 9-1/2" X 9-1/2" Bolt Spacing with 24 AAR Terminals w/Hardware.	L&W P/N 5730-X
4" Aluminum Double Junction Box Base 11-11/16" X 11-11/16" Bolt Spacing with 24 AAR Terminals w/Hardware.	L&W P/N 5830-X

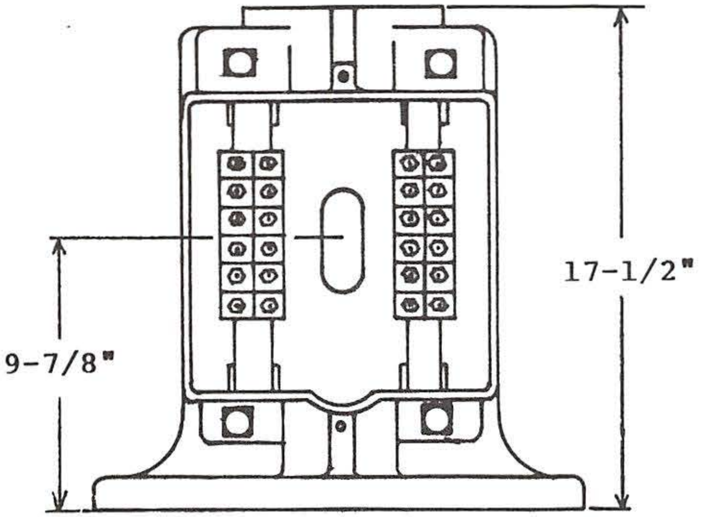
DESCRIPTION	ORDERING REFERENCE
4" Cast Iron Single Junction Box Base 9-1/2" X 9-1/2" Bolt Spacing with 12 AAR Terminals.	L&W P/N 5700-XFE
4" Cast Iron Single Junction Box Base 11-11/16" X 11-11/16" Bolt Spacing with 12 AAR Terminals.	L&W P/N 5800-XFE
4" Cast Iron Double Junction Box Base 9-1/2" X 9-1/2" Bolt Spacing with 24 AAR Terminals.	L&W P/N 5730-XFE
4" Cast Iron Double Junction Box Base 11-11/16" X 11-11/16" Bolt Spacing with 24 AAR Terminals.	L&W P/N 5830-XFE

5 INCH SPLIT BASE



DESCRIPTION	ORDERING REFERENCE
5" Alumimum Split Base 11-11/16" X 11-11/16" Bolt Spacing with hardware.	L&W P/N 5922-X
5" Cast Iron Split Base 11-11/16" X 11-11/16".	L&W P/N 5922-XFE

UNIVERSAL 5 INCH SINGLE JUNCTION BOX BASE

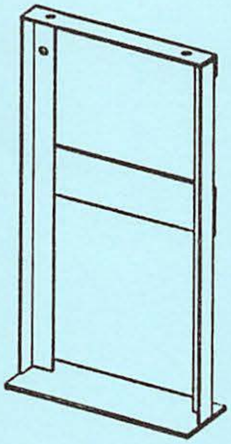


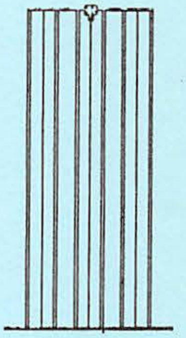
TO ORDER: Specify description and ordering reference

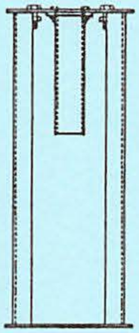
DESCRIPTION	ORDERING REFERENCE
5" Alum. back to back Junction Box Base for Gate app. with 1-1/2" & 2" conduit opening. 12 AAR terminals.	L&W P/N 5930-X
5" Cast Iron back to back Junction Box Base for gate app. with 2" conduit opening. 12 AAR terminals.	L&W P/N 5930-XFE

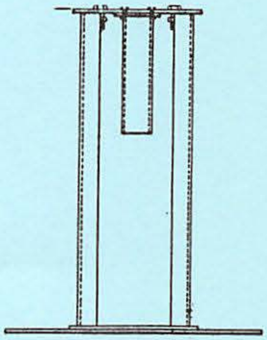
L&W industries, inc. 5-A

FOUNDATIONS









OCTOBER, 1987

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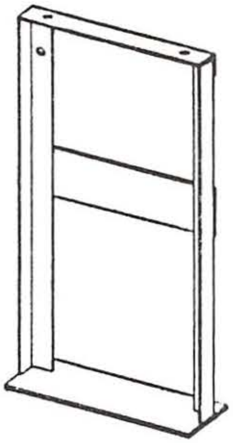
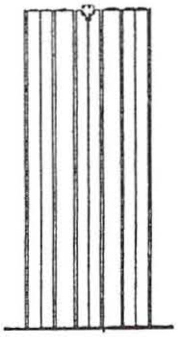
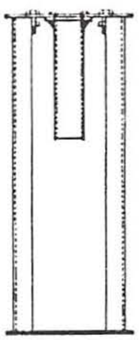
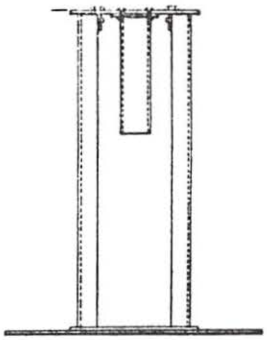
L&W industries, inc.

FOUNDATIONS









L&W Steel Foundations are welded together to form a rigid structure, that is hot-dip galvinized, and shipped complete with mounting hardware.

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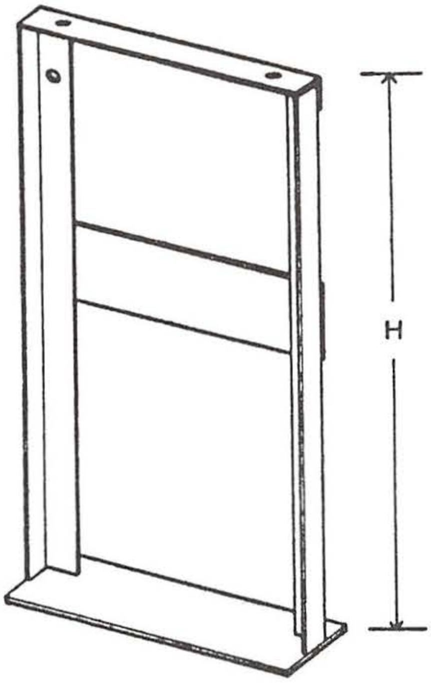
INSTRUMENT CASE PIERS

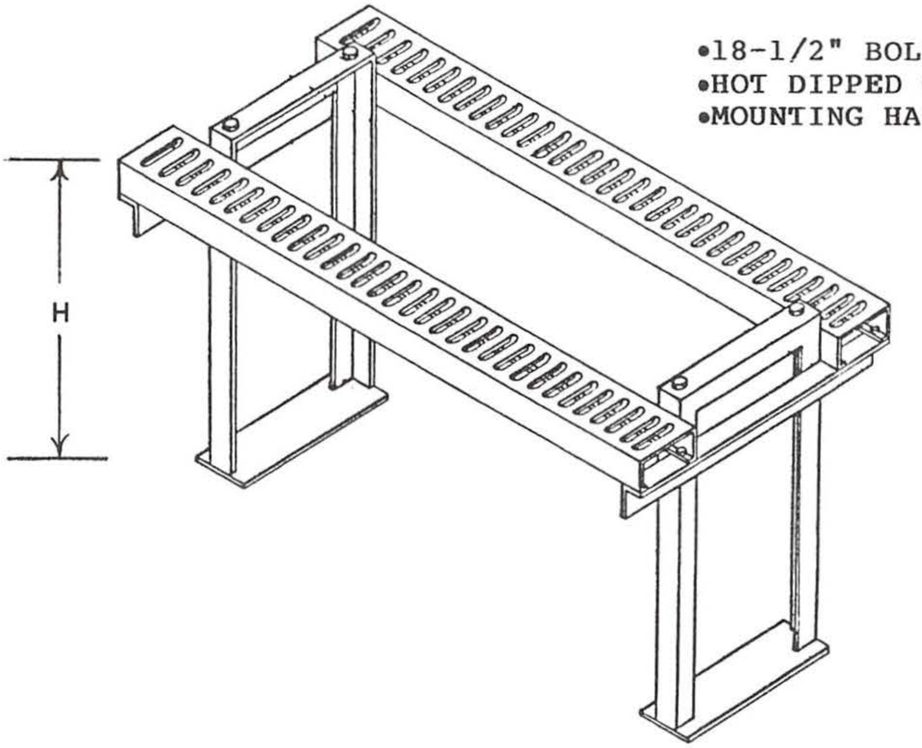


- 18-1/2 BOLT SPACING
- HOT DIPPED GALVINIZED
- MOUNTING HARDWARE INCLUDED

TO ORDER: Specify description and ordering reference.
NOTE: Part number is for one pier only.

DESCRIPTION	ORDERING REFERENCE
Instrument Case Pier, complete with two 3/4"x2" fully threaded Bolts and Hex Nuts. 18-1/2" bolt spacing. H=36"	L&W P/N 20201-X
Instrument Case Pier, complete with two 3/4"x2" fully threaded Bolts and Hex Nuts. 18-1/2" bolt spacing. H=48"	L&W P/N 20101-X
Instrument Case Pier, complete with two 3/4"x2" fully threaded Bolts and Hex Nuts. 18-1/2" bolt spacing. H=60"	L&W P/N 20001-X

STEEL
INSTRUMENT CASE FOUNDATIONS

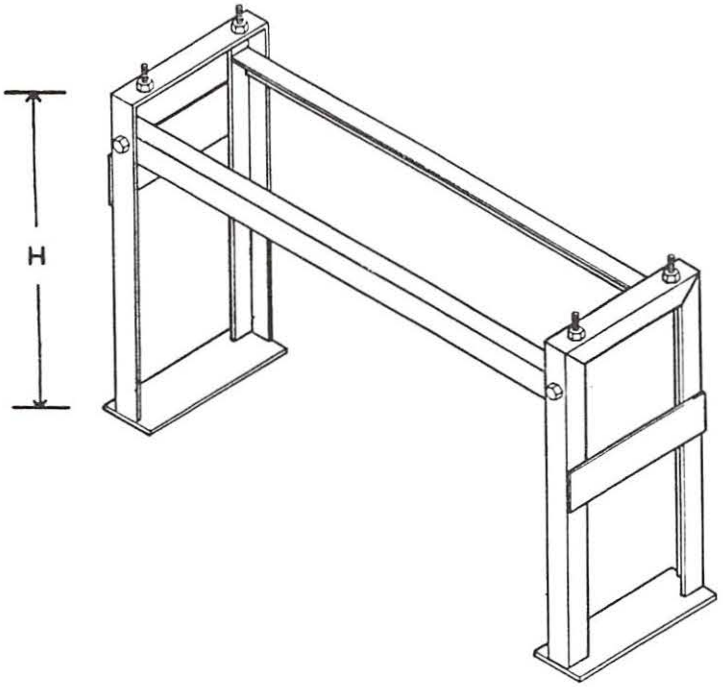


- •18-1/2" BOLT SPACING
- •HOT DIPPED GALVINIZED
- •MOUNTING HARDWARE INCLUDED

TO ORDER: Specify description and ordering reference. Replace ## in the part number with the bolt spacing of the instrument case to be mounted. For example, to order an instrument case foundation with one walkway for a case with a 40-3/4" bolt spacing, specify: Foundation, Instrument Case, with one walkway and mounting bolts for 40-3/4" bolt spacing; Part number= 20174-403/4X.

DESCRIPTION	ORDERING REFERENCE
Foundation, Instrument Case, complete with one Walkway and fully threaded Mounting Bolts. (##=Instrument Case Bolt Spacing) H=48"	L&W P/N 20174-##X
Foundation, Instrument Case, complete with two Walkways and fully threaded Mounting Bolts. (##=Instrument Case Bolt Spacing) H=48"	L&W P/N 20178-##X

INSTRUMENT CASE FOUNDATIONS



TO ORDER: Specify description and ordering reference. Replace ## in the part number with the bolt spacing of the instrument case to be mounted. For example, to order an instrument case foundation with one walkway for a case with a 40-3/4" bolt spacing, specify: Foundation, Instrument Case, with one walkway and mounting bolts for 40-3/4" bolt spacing; Part number= 20200-403/4X.

DESCRIPTION	ORDERING REFERENCE
Instrument Case Foundation complete with Mounting Bolts H=48"	L&W P/N 20200-##X

INSTRUMENT HOUSE FOUNDATIONS

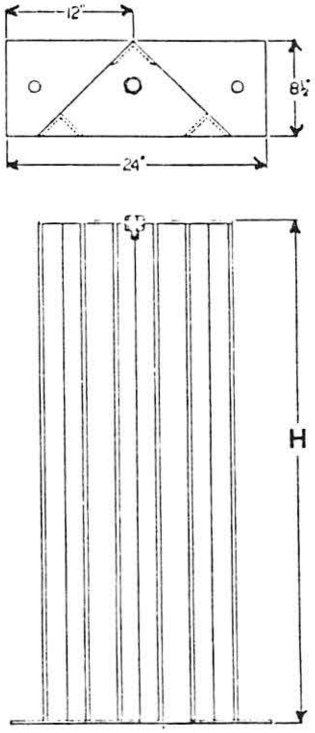


FIG. 1

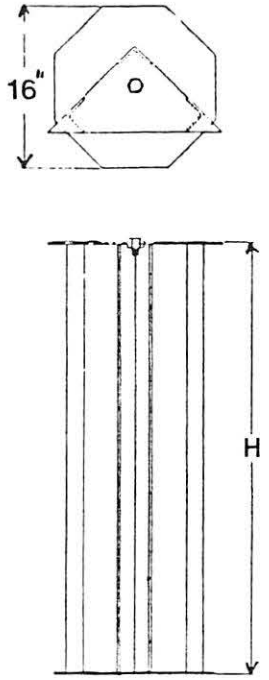


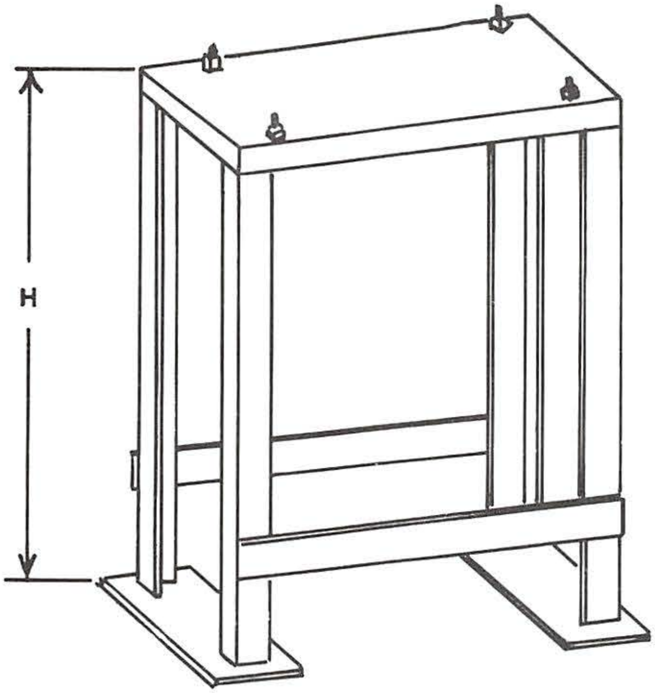
FIG. 2

- HOT DIPPED GALVANIZED
- MOUNTING HARDWARE INCLUDED
- OTHER HEIGHTS AVAILABLE ON REQUEST

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Standard Instrument House Foundation, with hardware. H=48" in Fig.1 Cross Reference: Safetran No. 035800-2X	L&W P/N 20126-X
Instrument House Foundation for augered holes, with octagonal base, and Hardware. H=36" in Fig.2	L&W P/N 20126-4X

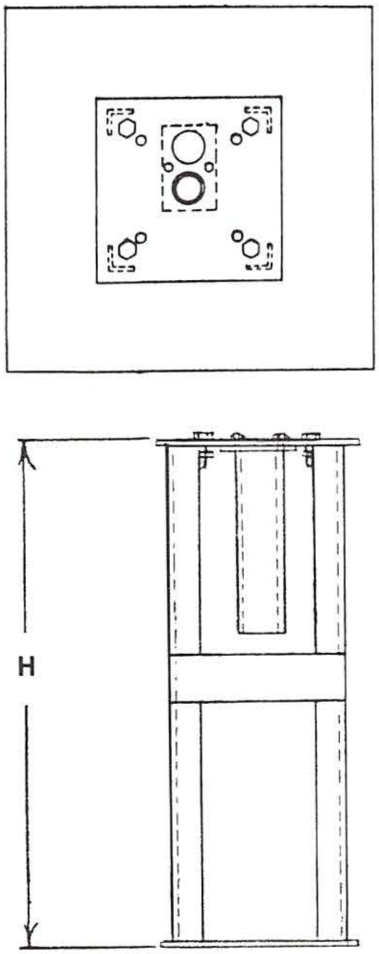
INSTRUMENT CASE FOUNDATION



TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
Instrument Case Foundation complete with mounting bolts for B10 style cases. H=48" 23-7/8x23-7/8" bolt spacing.	L&W P/N 20180-X

FLASHING LIGHT GATE
SIGNAL FOUNDATION

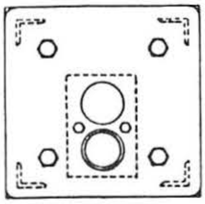


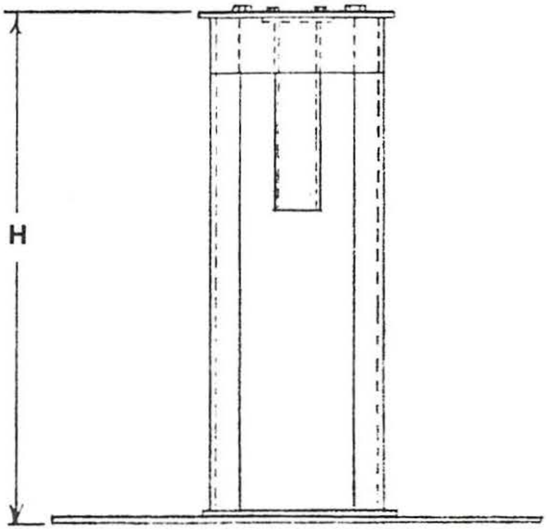
- GALVANIZED STEEL
- ADJUSTABLE CABLE RISER
- 9-1/2"X9-1/2" OR 11-11/16"X11-11/16" BOLT SPACING

TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
Flashing Light Gate Signal Foundation complete with 4 each 1" Mounting Bolts with 9-1/2 and 11-11/16" bolt spacing. H=36-1/2"	L&W P/N 20130-X
Flashing Light Gate Signal Foundation complete with 4 each 1" Mounting Bolts with 9-1/2 and 11-11/16" bolt spacing. H=48-1/2"	L&W P/N 20140-1X

WAYSIDE SIGNAL
FOUNDATION





TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
Wayside Signal Foundation complete with 4 each Mounting Bolts and 11-11/16" X 11-11/16" Bolt Spacing H=48"	L&W P/N 20140-X

LENSES

BELOW IS A LISTING OF LENSES THAT L&W INDUSTRIES HAS AVAILABLE FROM STOCK

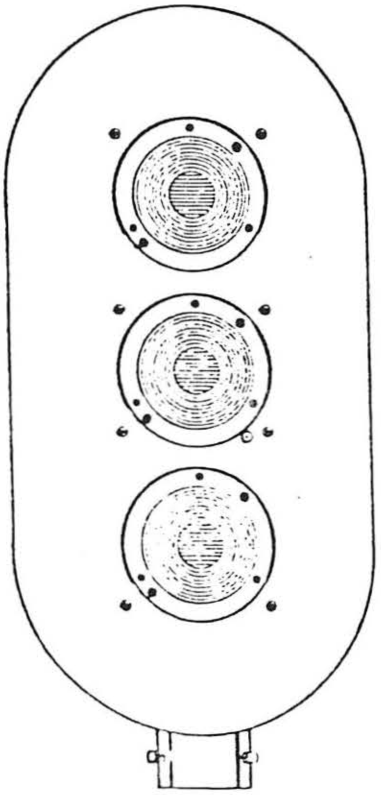
IF THERE ARE ANY OTHER LENSES YOU REQUIRE THAT ARE NOT SHOWN PLEASE CALL

L&W P/N	DESP
5092	LENS PLASTIC RED 8-3/8" DIA 30 DEG SPREAD
5092Y	LENS PLASTIC YELLOW 8-3/8" DIA 30 DEG SPREAD
5093	LENS LEXAN RED 8-3/8" DIA 20 DEG SPREAD 32 DEG DEFLECTING
5094	LENS LEXAN RED 8-3/8" DIA 30 DEG SPREAD 15 DEG DEFLECTING
5096	LENS LEXAN RED 8-3/8" DIA 15DEG SPREAD 15 DEG DEFLECTING
5292	LENS LEXAN RED 12" DIA 30 DEG SPREAD 15 DEG DEFLECTING
5293	LENS LEXAN RED 12" DIA 20 DEG SPREAD 32 DEG DEFLECTING
5294	LENS LEXAN RED 12" DIA 70 DEG SPREAD
4554GC	LENS GLASS OUTER DOUBLET 8-3/8" DIA 40 DEG DEFLECTING 4" FOCUS
4556GG	LENS GLASS INNER DOUBLET 5-1/2" DIA GREEN
4556GL	LENS GLASS INNER DOUBLET 5-1/2" DIA LUNAR

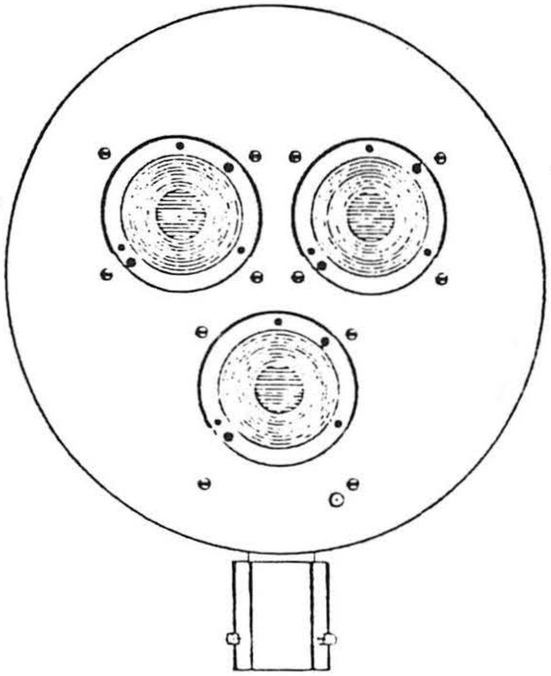
LENSES (CONT)

L&W P/N	DESP
4556GR	LENS GLASS INNER DOUBLET 5-1/2" DIA RED
4556GY	LENS GLASS INNER DOUBLET 5-1/2" DIA YELLOW
4592GC	LENS GLASS OUTER DOUBLET 8-3/8" DIA 40 DEG DEFLECTING 5" FOCUS
4554C	LENS PLASTIC OUTER DOUBLET 8-3/8" DIA CLEAR 40 DEG DEFLECTING 4" FOCUS
4592C	LENS LEXAN OUTER DOUBLET 8-3/8" DIA 40 DEG DEFLECTING 5" FOCUS
4594C	LENS PLASTIC OUTER DOUBLET 6-3/8" DIA 40 DEG DEFLECTING 4" FOCUS
4950	LENS LEXAN CLEAR 8-3/8"DIA 1/4" FLAT PROTECTOR
4953	LENS LEXAN CLEAR 8-3/8" DIA 1/4" FLAT PROTECTOR 10 DEG DEFLECTING

COLORLIGHT SIGNALS



LS450

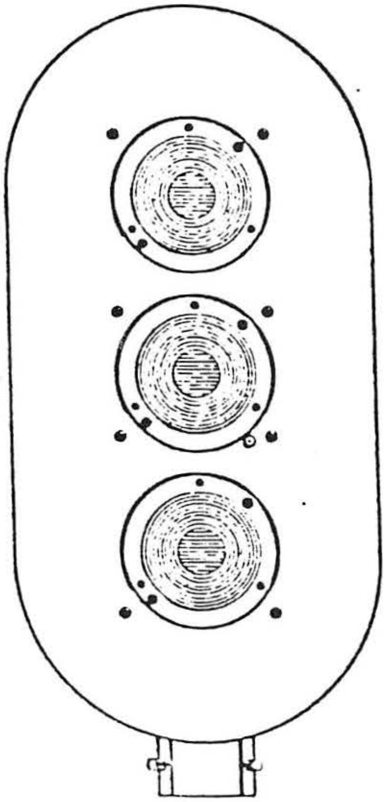


LTS450

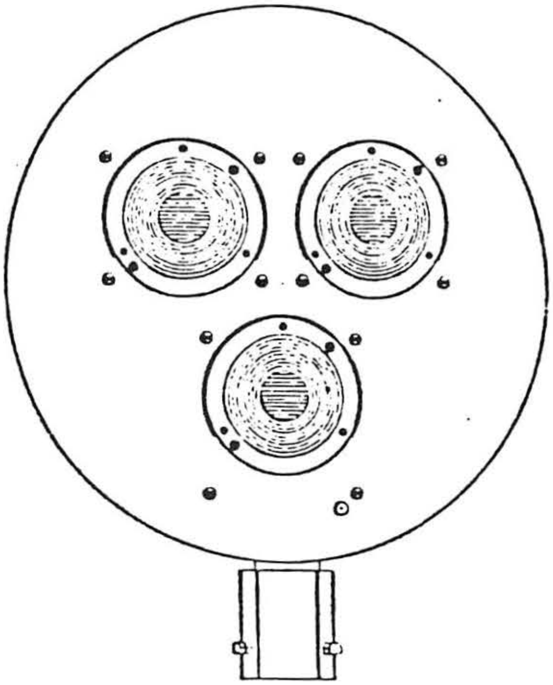
OCT, 1987

3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

COLORLIGHT SIGNALS



LS450



LTS450

L&W Colorlight Signals are manufactured from modular cast aluminum housings which can be arranged in 1, 2, 3 or more aspects: Vertical or Triangular. All doors and modular housings are sealed with neoprene gaskets and are watertight. Hinged doors are closed with standard 1/2" nut driver and are lockable with a padlock. All hardware is stainless steel.

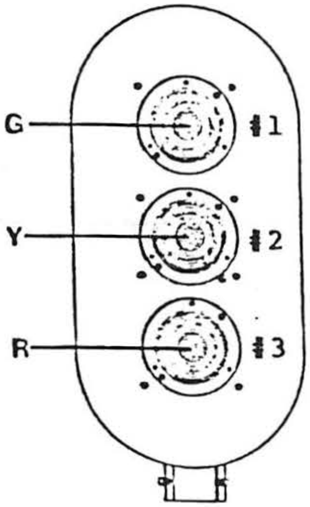
Lenses are doublet lens assemblies with ventilation between outer and inner lenses, as well as ventilation in the housing. Anti phantom screens, and honeycomb phankill units are available. The doublet lens assembly and 10 Volt-18 Watt S-11 single contact in the factory and then pre-sealed. A sighting scope is installed to assist during field alignment.

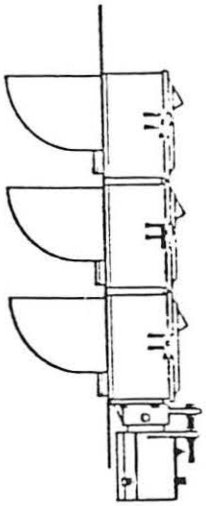
A resistor can be provided in one or more aspects when specified. Backgrounds and hoods are heavy gauge aluminum painted flat black. All LS450 Colorlight Signals are shipped completely assembled.

L&W industries, inc.

STACKED
COLOR LIGHT SIGNALS
WITH 8-3/8" LENSES

LS450





- FOR LENSES SEE CATALOG SECTION 6
- PLASTIC OUTER LENSES
- GLASS INNER LENSES
- 40 DEGREE DEFLECTING OUTER DOUBLET LENS
- 10 VOLT, 18 WATT S-11 SIGNAL BULB
- SHIPPED COMPLETELY ASSEMBLED AS SHOWN
- ANTI-PHANTOM SCREEN ON GREEN AND YELLOW LENSES

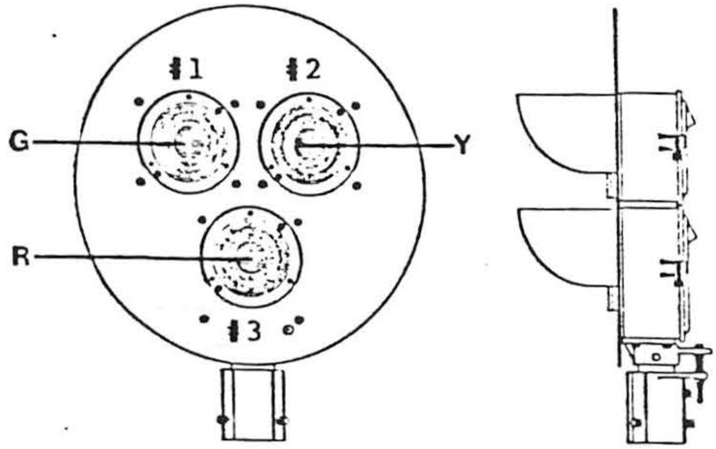
TO ORDER: Specify description and ordering reference. Replace # with the color lenses you require. Order of # is descending starting with top lense. For example, to order a three-position color light signal with Green, Yellow, and Red lenses specify: Colorlight signal, Vertical, 4533-XGYR. Should you require special lenses, adjustable resistors or different signal bulbs please specify when ordering.

DESCRIPTION	ORDERING REFERENCE
Signal, Colorlight, Vertical, One-Position.	L&W P/N 4531-X# #-REPLACE WITH LENSE COLOR
Signal, Colorlight, Vertical, Two-Position.	L&W P/N 4532-X##
Signal, Colorlight, Vertical, Three-Postion.	L&W P/N 4533-X###
Signal, Colorlight, Vertical, Four-Position.	L&W P/N 4534-X####

3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

TRIANGULAR
COLOR LIGHT SIGNALS
WITH 8-3/8" LENSES

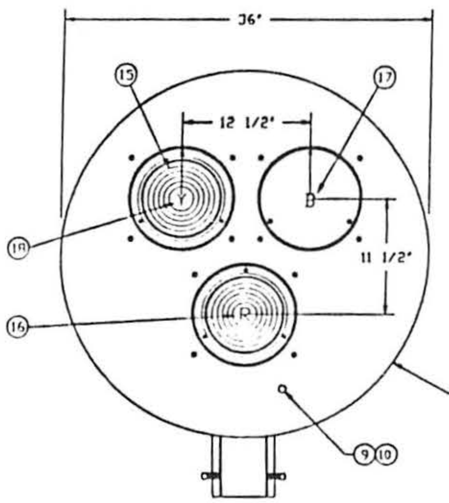
LTS450

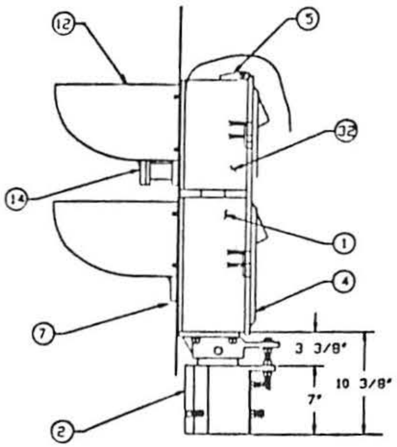


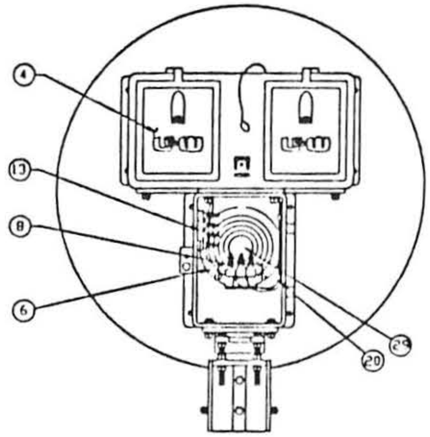
- FOR LENSES SEE CATALOG SECTION 6
- PLASTIC OUTER LENSES
- GLASS INNER LENSES
- 40 DEGREE DEFLECTING OUTER DOUBLET LENS
- 10 VOLT, 18 WATT S-11 SIGNAL BULB
- SHIPPED COMPLETELY ASSEMBLED AS SHOWN
- ANTI-PHANTOM SCREEN ON GREEN AND YELLOW LENSES

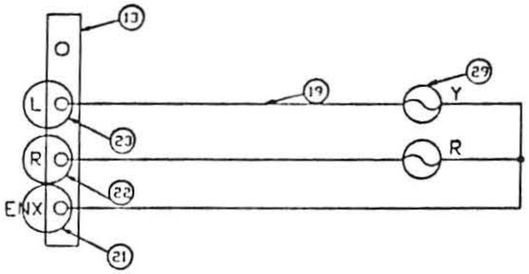
TO ORDER: Specify description and ordering reference Replace # with the color lenses you require. Order of # is clockwise starting with position #1. For example, to order a three-position color light signal with Green, Yellow, and Red lenses specify: Colorlight signal, triangular, 4543-XGRY. Should you require special lenses, adustable resistors or different signal bulbs please specify when ordering. To indicate a blank space please use the letter "B".

DESCRIPTION	ORDERING REFERENCE
Signal, Colorlight, Triangular, One-Position	4541-X# #-REPLACE WITH LENSE COLOR
Signal, Colorlight, Triangular, Two-Position	4542-X##
Signal, Colorlight, Triangular, Three-Position	4543-X###









NOTES

CUSTOMER : UNION SWITCH & SIGNAL.
REFERENCES: CHICAGO UNION STATION
STANDARDS: AAR MP 7.1.1, & 15.2.10
TOLERANCES STANDARD
MATERIALS: CAST ALUMINUM
PROCESSES: ASSEMBLE & PACKAGE
FINISH: FRONT, INSIDE AND BACKGROUNDS
FLAT BLACK

SIGNAL BULBS ARE SHIPPED PACKAGED SEPARATE FROM THE SIGNAL HEAD

SIGNAL HEADS TO BE PREWIRED AND SHIPPED ASSEMBLED

ONE COMMON DOOR WILL COVER REAR ENTRY, SO THAT ALL LIGHTS WILL BE ILLUMINATED BY BACK SUNLIGHT WHEN THE SINGLE DOOR IS OPEN.

ALL HARDWARE IS STAINLESS STEEL.
INNER DOUBLET COLORED LENSES GLASS ONLY.
OUTER DOUBLET CLEAR LENSES LEXAN ONLY.
4" FOCUS 40° DEFLECTION CLOSE UP.

REVISIONS

BILL OF MATERIALS

ITEM	PART #	QTY	DESCRIPTION
1	4542	1	BOTTOM HOUSING
2	4771-X	1	5" TOP OF MAST TEETER MOUNT
3			
4	4544-2	1	SINGLE TRIANGULAR COLORLIGHT DOOR
5	4548-1	4	HINGE
6	4535	2	DOUBLET CASTING
7	4552-1	2	RETAINING RING
8	4669-1X	2	COLORLIGHT SOCKET ASSEMBLY
9	4515-1	1	PEEP SIGHT KIT
10	4516	2	PEEP SIGHT BUTTON
11	4540	1	3 POSITION TRIANGULAR BACKGROUND
12	4695	2	COLORLIGHT HOOD
13	2230-4	1	1x4 TERMINAL BLOCK
14	4800-X	1	PHANKILL ASSEMBLY
15	4554	2	8 3/8"x40° OUTER DOUBLET LENS
16	4556GR	1	5 1/2" INNER DOUBLET LENS (RED)
17	4549	1	BLANK COVER PLATE
18	4556GY	1	5 1/2" INNER DOUBLET LENS (YELLOW)
19	6400-11.83	1	#14 CASE WIRE 142" LG
20	1775	2	WIRE CLAMP
21	2125	3	ENX TAGS
22	2126R	1	RED COLOR TAG
23	2126Y	1	YELLOW COLOR TAG
24			
25	LV-25	1	CARTON
26	LV-26	1	LID
27	LV-5	3	HOOD INSERT
28	LV-6	3	BUILD UP PADS
29	5008	2	BULB 18 WATT 10 VOLT
32	4543	2	TOP HOUSING

DATE	7/8/92
DWN BY	
CHK BY	
ENGR	

UNLESS OTHERWISE SPEC. ALL TOLERANCES EQUAL 1/32

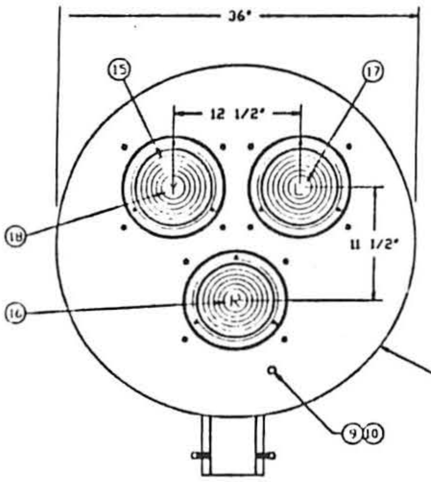
LEW INDUSTRIES, INC.

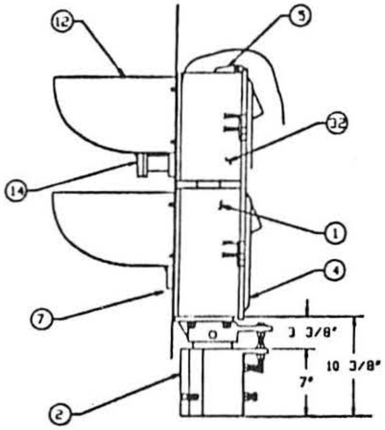
THREE POSITION TRIANGULAR COLORLIGHT SIGNAL

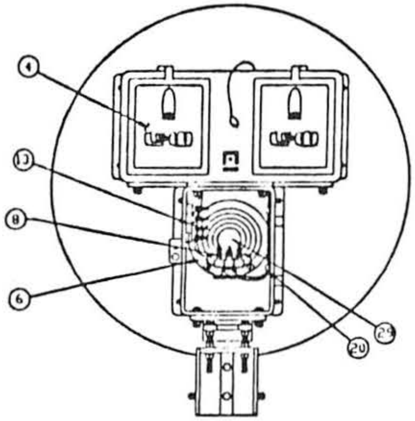
SIZE	CODE IDENT. NO.	DRAWING NO.
B	41024XYR	4102-4XYR

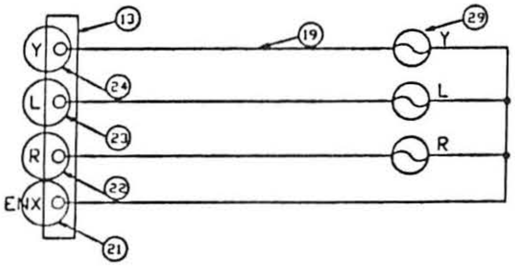
SCALE NONE

(1-12)









NOTES

CUSTOMER : UNION SWITCH & SIGNAL.
REFERENCES: CHICAGO UNION STATION
STANDARDS: AAR MP 7.1.L & 15.2.10
TOLERANCES STANDARD
MATERIALS: CAST ALUMINUM
PROCESSES: ASSEMBLE & PACKAGE
FINISH: FRONT, INSIDE AND BACKGROUNDS FLAT BLACK

SIGNAL BULBS ARE SHIPPED PACKAGED SEPARATE FROM THE SIGNAL HEAD

SIGNAL HEADS TO BE PREWIRED AND SHIPPED ASSEMBLED

ONE COMMON DOOR WILL COVER REAR ENTRY, SO THAT ALL LIGHTS WILL BE ILLUMINATED BY BACK SUNLIGHT WHEN THE SINGLE DOOR IS OPEN.

ALL HARDWARE IS STAINLESS STEEL.
INNER DOUBLET COLORED LENSES GLASS ONLY.
OUTER DOUBLET CLEAR LENSES LEXAN ONLY.
4' FOCUS 40° DEFLECTION CLOSE UP.

REVISIONS

BILL OF MATERIALS

ITEM	PART #	QTY	DESCRIPTION
1	4542	1	BOTTOM HOUSING
2	4771-X	1	5" TOP OF MAST TEETER MOUNT
4	4544-2	1	SINGLE TRIANGULAR COLORLIGHT DOOR
5	4548-1	4	HINGE
6	4535	3	DOUBLET CASTING
7	4552-1	3	RETAINING RING
8	4669-1X	3	COLORLIGHT SOCKET ASSEMBLY
9	4515-1	1	PEEP SIGHT KIT
10	4516	2	PEEP SIGHT BUTTON
11	4548	1	3 POSITION TRIANGULAR BACKGROUND
12	4695	3	COLORLIGHT HOOD
13	2230-4	1	1x4 TERMINAL BLOCK
14	4800-X	2	PHANKILL ASSEMBLY
15	4554	3	8 3/8 x40° OUTER DOUBLET LENS
16	4556GR	1	5 1/2" INNER DOUBLET LENS (RED)
17	4556YY	1	5 1/2" INNER DOUBLET LENS (LUNAR)
18	4556GL	1	5 1/2" INNER DOUBLET LENS (YELLOW)
19	6400-1183	1	#14 CASE WIRE 142" LG
20	1775	2	WIRE CLAMP
21	2125	4	ENX TAGS
22	2126R	1	RED COLOR TAG
23	2126Y	1	YELLOW COLOR TAG
24	2126L	1	LUNAR COLOR TAG
25	LW-25	1	CARTON
26	LW-26	1	LID
27	LW-5	3	HOOD INSERT
28	LW-6	3	BUILD UP PADS
29	5008	3	BULB 18 WATT 10 VOLT
32	4543	2	TOP HOUSING

DATE	7/8/92
DWN BY	
CHK BY	
ENGR	

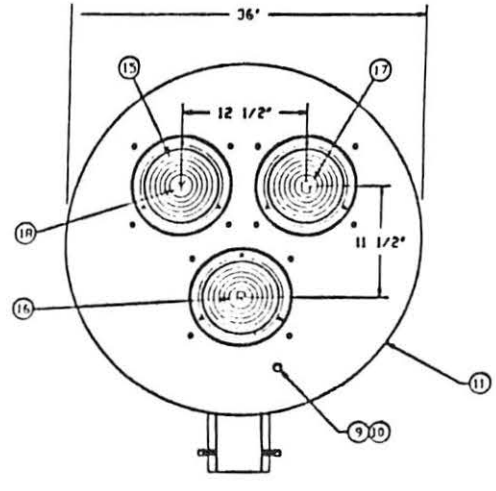
UNLESS OTHERWISE SPEC. ALL TOLERANCES EQUAL 1/32

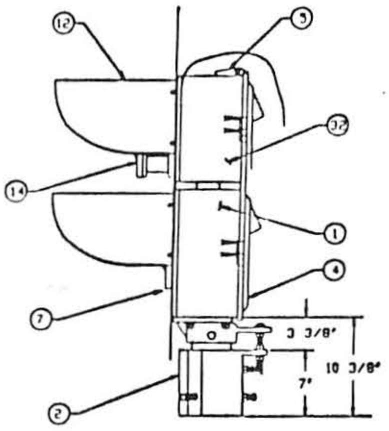
LEW INDUSTRIES, INC.

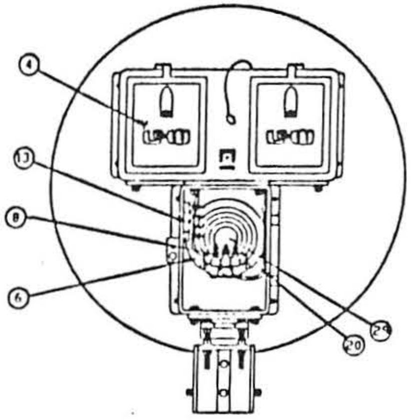
THREE POSITION TRIANGULAR COLORLIGHT SIGNAL

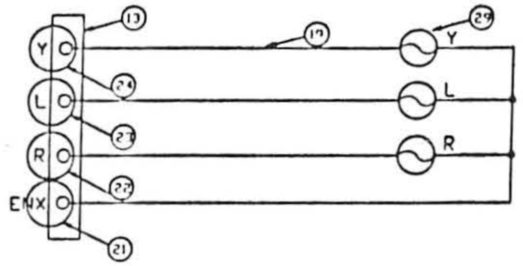
SIZE	CODE IDENT. NO.	DRAWING NO.
B	41034LYR	4103-4XYLR

SCALE NONE









NOTES

CUSTOMER : UNION SWITCH & SIGNAL.
REFERENCES: CHICAGO UNION STATION
STANDARDS: AAR MP 7.1.1, & 15.2.10
TOLERANCES STANDARD
MATERIALS: CAST ALUMINUM
PROCESSES: ASSEMBLE & PACKAGE
FINISH: FRONT, INSIDE AND BACKGROUNDS FLAT BLACK

SIGNAL BULBS ARE SHIPPED PACKAGED SEPARATE FROM THE SIGNAL HEAD

SIGNAL HEADS TO BE PREWIRED AND SHIPPED ASSEMBLED

ONE COMMON DOOR WILL COVER REAR ENTRY, SO THAT ALL LIGHTS WILL BE ILLUMINATED BY BACK SUNLIGHT WHEN THE SINGLE DOOR IS OPEN.

ALL HARDWARE IS STAINLESS STEEL.
INNER DOUBLET COLORED LENSES GLASS ONLY.
OUTER DOUBLET CLEAR LENSES LEXAN ONLY.
4" FOCUS 40° DEFLECTION CLOSE UP.

REVISIONS

BILL OF MATERIALS

ITEM	PART #	QTY	DESCRIPTION
1	4542	1	BOTTOM HOUSING
2	4771-X	1	5' TOP OF MAST TEETER MOUNT
4	4544-2	1	SINGLE TRIANGULAR COLORLIGHT DOOR
5	4548-1	4	HINGE
6	4535	3	DOUBLET CASTING
7	4552-1	3	RETAINING RING
8	4669-1X	3	COLORLIGHT SOCKET ASSEMBLY
9	4515-1	1	PEEP SIGHT KIT
10	4516	2	PEEP SIGHT BUTTON
11	4548	1	3 POSITION TRIANGULAR BACKGROUND
12	4695	3	COLORLIGHT HOOD
13	2230-4	1	1x4 TERMINAL BLOCK
14	4800-X	2	PHANKILL ASSEMBLY
15	4554	3	8 3/8"x40° OUTER DOUBLET LENS
16	4556GR	1	5 1/2" INNER DOUBLET LENS (RED)
17	4556GG	1	5 1/2" INNER DOUBLET LENS (GREEN)
18	4556GY	1	5 1/2" INNER DOUBLET LENS (YELLOW)
19	6400-11B3	1	#14 CASE WIRE 142" LG
20	1775	2	WIRE CLAMP
21	2125	4	CNX TAGS
22	2126R	1	RED COLOR TAG
23	2126Y	1	YELLOW COLOR TAG
24	2126G	1	GREEN COLOR TAG
25	LV-25	1	CARTON
26	LV-26	1	LID
27	LV-5	3	HOOD INSERT
28	LV-6	3	BUILD UP PADS
29	5008	3	BULB 18 WATT 10 VOLT
32	4543	2	TOP HOUSING

DATE	7/8/92
DWN BY	
CHK BY	
ENGR	

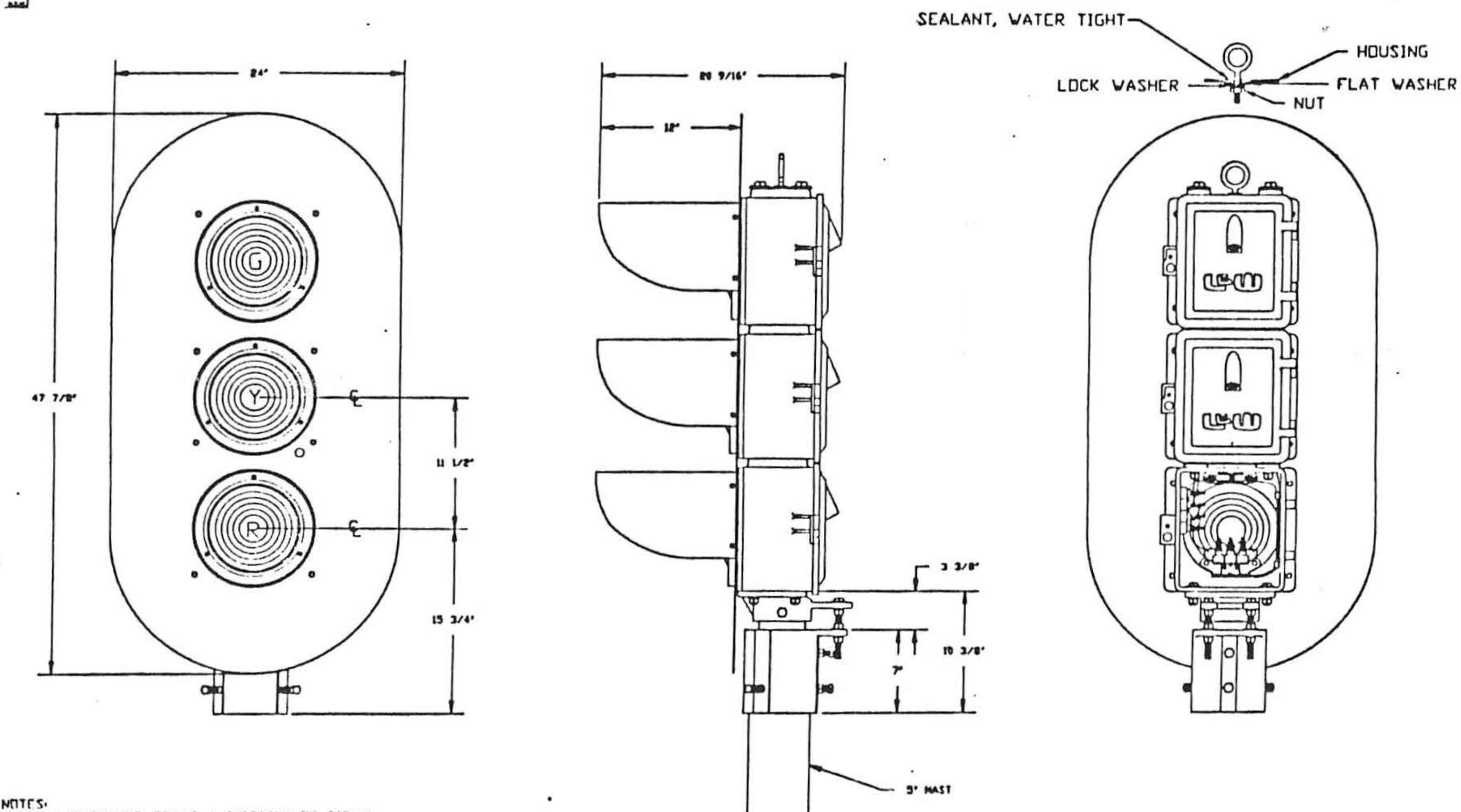
UNLESS OTHERWISE SPEC. ALL TOLERANCES EQUAL 1/32

LEW INDUSTRIES, INC.

THREE POSITION TRIANGULAR COLORLIGHT SIGNAL

SIZE	CODE IDENT. NO.	DRAWING NO.
B	41034GYR	4103-4XGYR

SCALE NONE

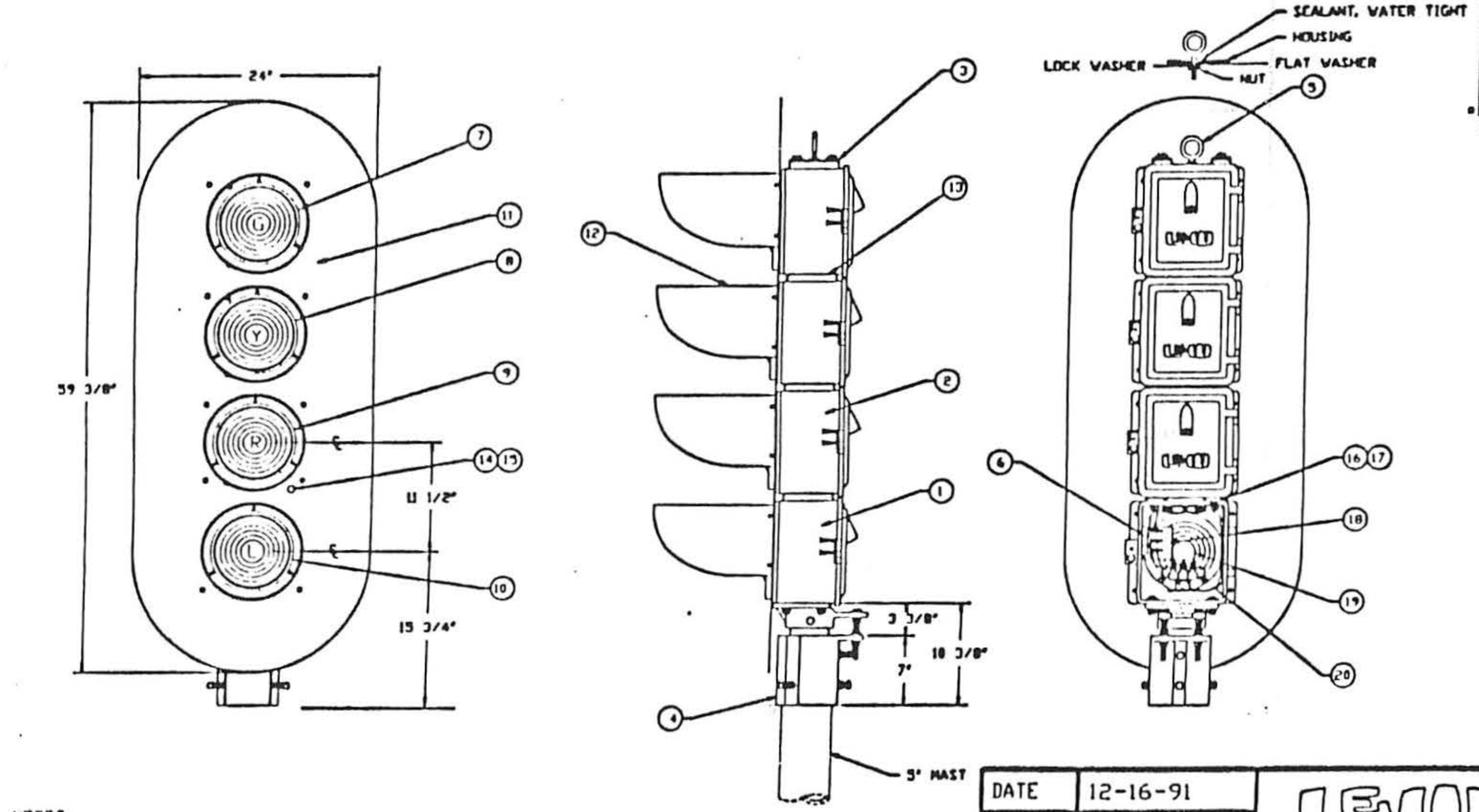

SEALANT, WATER TIGHT
HOUSING
LOCK WASHER
FLAT WASHER
NUT
24"
47 7/8"
G
Y
R
℄
℄
11 1/2"
15 3/4"
29 9/16"
12"
3 3/8"
10 3/8"
7"
5" MAST

NOTES:
HOODS, BACKGROUND, FRONT, & INTERIOR OF SIGNAL TO BE FLAT BLACK
PAINTING CONFORMS TO A.A.R. SPECIFICATIONS PART 110 PARAGRAPH 29 & 30
ALL CAST ALUMINUM IN ACCORDANCE WITH A.A.R. SPEC. PART 146, PARA 6(d)
ALL HARDWARE IS STAINLESS STEEL.
INNER DOUBLET COLORED LENSES GLASS ONLY.
OUTER DOUBLET CLEAR LENSES LEXAN ONLY.
4' FOCUS 40° DEFLECTION CLOSE UP.

DATE	1-7-91	INDUSTRIES, INC.
DWN BY	T.L.B.	
CHK BY	R. A. W	3 POSITION COLORLIGHT SIGNAL
ENGR		SIZE C CODE IDENT. NO. 4533-X-S DRAWING NO. 4533-X
UNLESS OTHERWISE SPEC. ALL TOLERANCES EQUAL 1/32		SCALE 1" = 6"

ITEM	PART #	QTY	DESCRIPTION
[illegible]	[illegible]	[illegible]	[illegible]

* NOT SHOWN


SEALANT, WATER TIGHT
HOUSING
LOCK WASHER
FLAT WASHER
NUT
24"
59 3/8"
11 1/2"
15 3/4"
3 3/8"
7"
10 3/8"
5" MAST
G
Y
R
L
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

NOTES:
HOODS, BACKGROUND, FRONT, & INTERIOR OF SIGNAL TO BE FLAT BLACK

DATE	12-16-91
DWN BY	T.L.B.
CHK BY	R.A.W.
ENGR	Rollo

UNLESS OTHERWISE SPEC. ALL TOLERANCES EQUAL 1/32

L&W INDUSTRIES, INC.

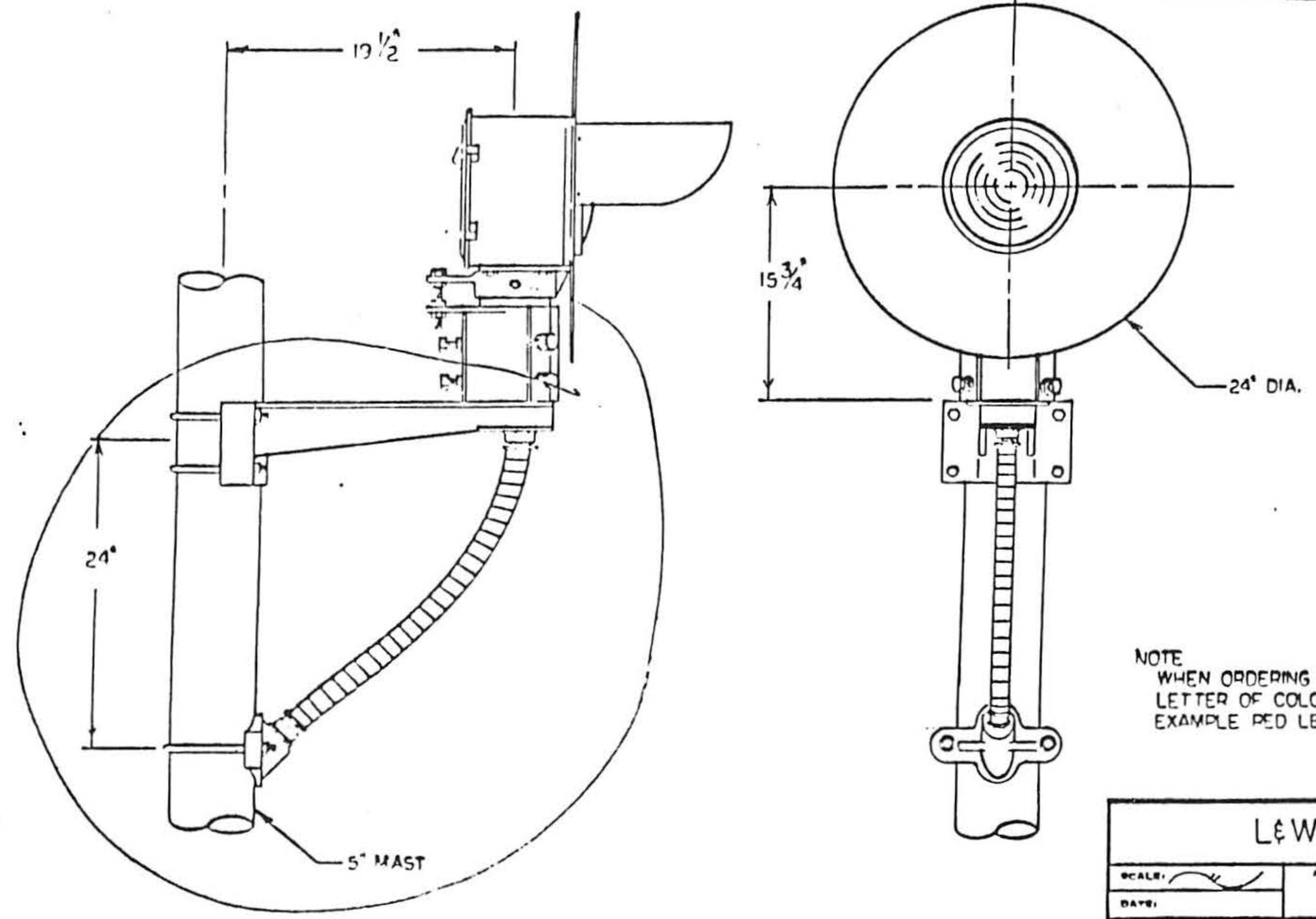
4 POSITION COLORLIGHT SIGNAL

SIZE	CODE IDENT. NO.	DRAWING NO.
B	4534-4X	4534-4X

SCALE NONE

SIGCON (1-12)

ITEM	PART Nº	QTY	DESCRIPTION
1	4531-X	1	ONE POSITION C.L.S. ASSEMBLY
2	4600-X	1	STAND OFF ASSEMBLY



LENS COLOR	CODE
GREEN	G
YELLOW	Y
RED	R
LUNAR	L

NOTE
WHEN ORDERING SPECIFY LENS COLOR BY ADDING FIRST LETTER OF COLOR AS SUFFIX TO ASSEMBLY Nº.
EXAMPLE RED LENS WOULD BE 4531-1XR.

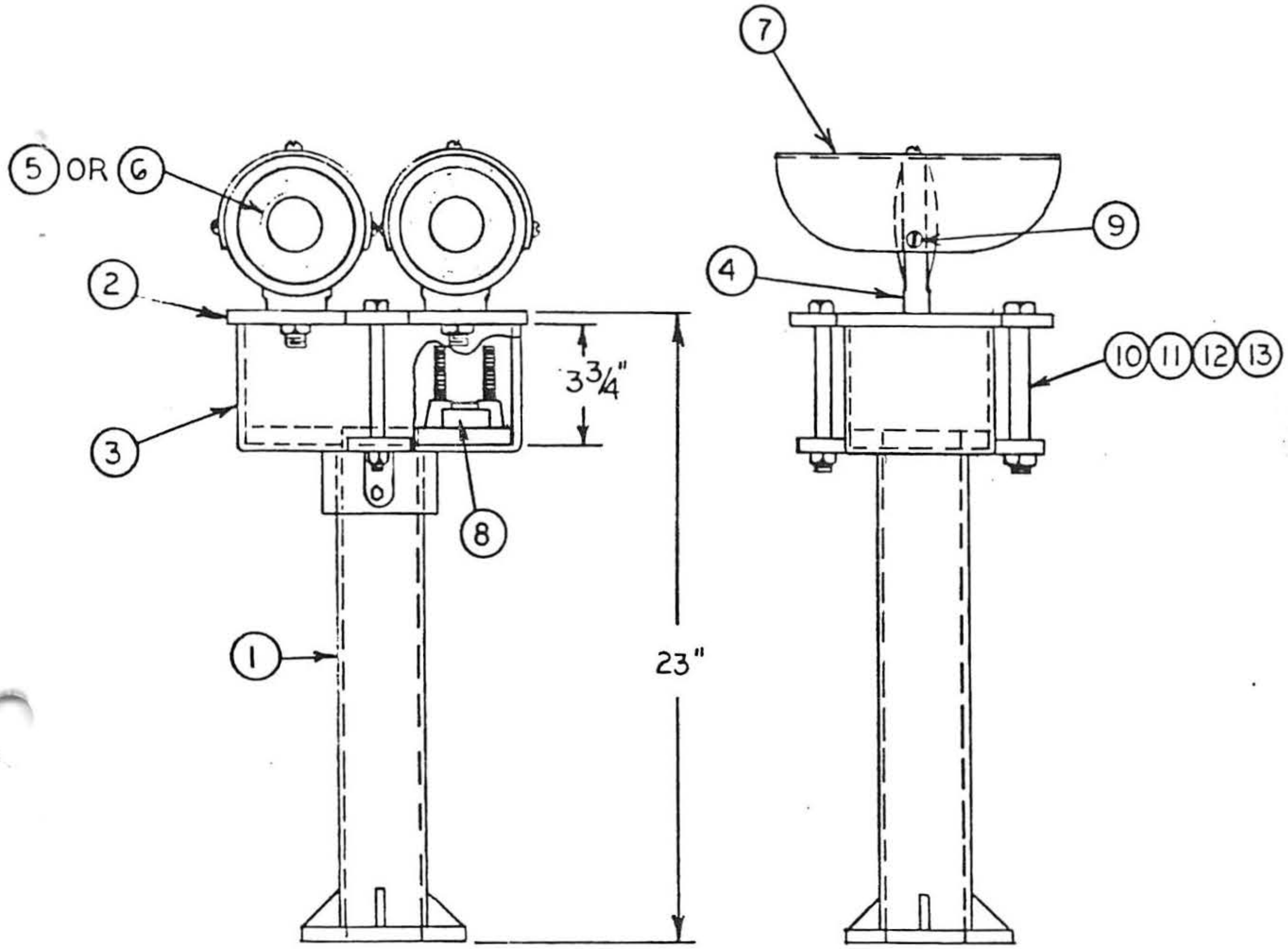
L&W INDUSTRIES, INC.

SCALE:
APPROVED BY:
DRAWN BY M. J. M.
DATE:
REVISED

ONE POSITION COLOR LIGHT SIGNAL

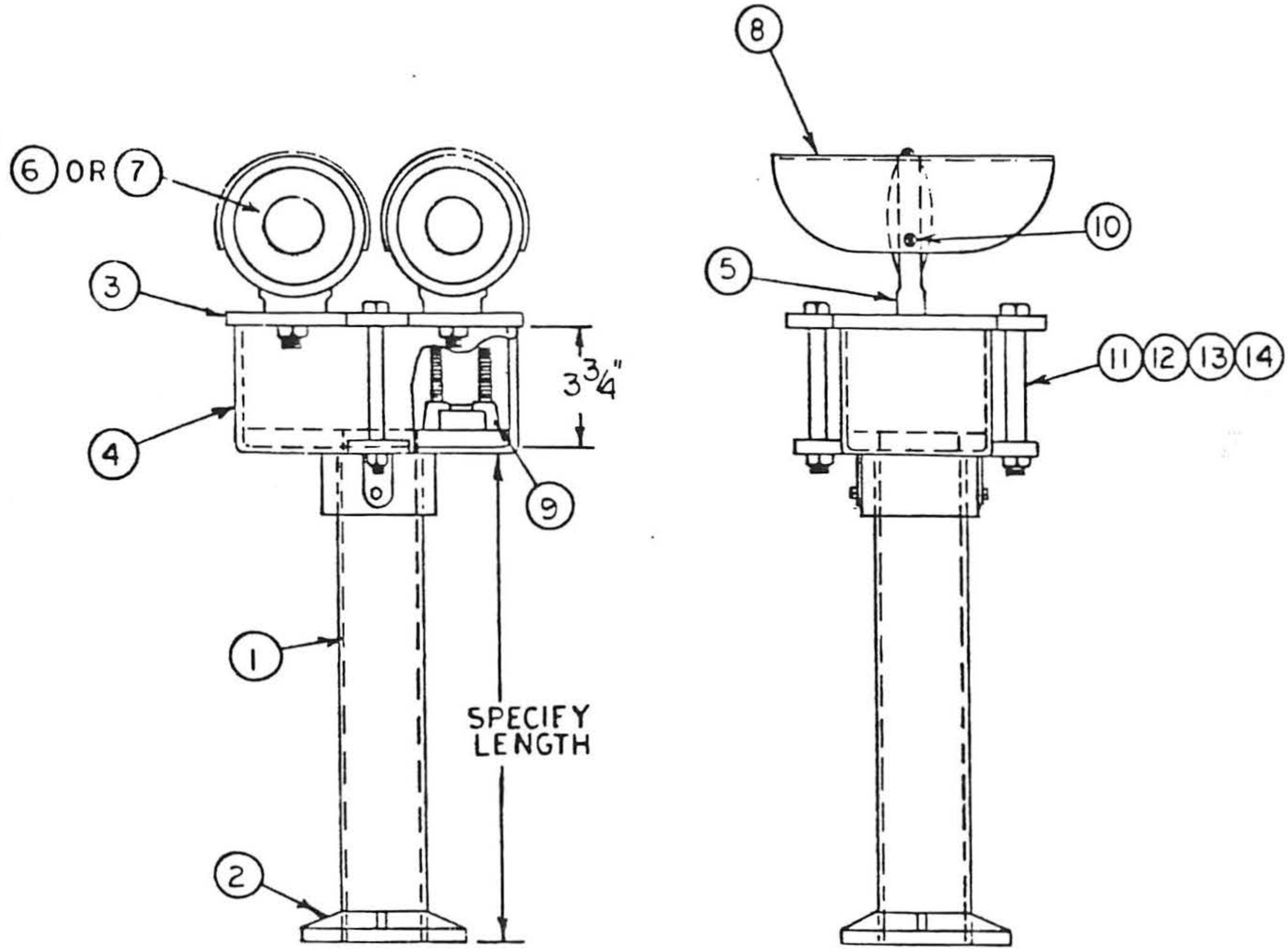
DRAWING NUMBER
4531-1X

11517 PRINTED ON NO. 1000H CLEARPRINT



COLORLIGHT ELECTRIC SWITCH
LAMP SIGNAL ASSEMBLY
7200-1X

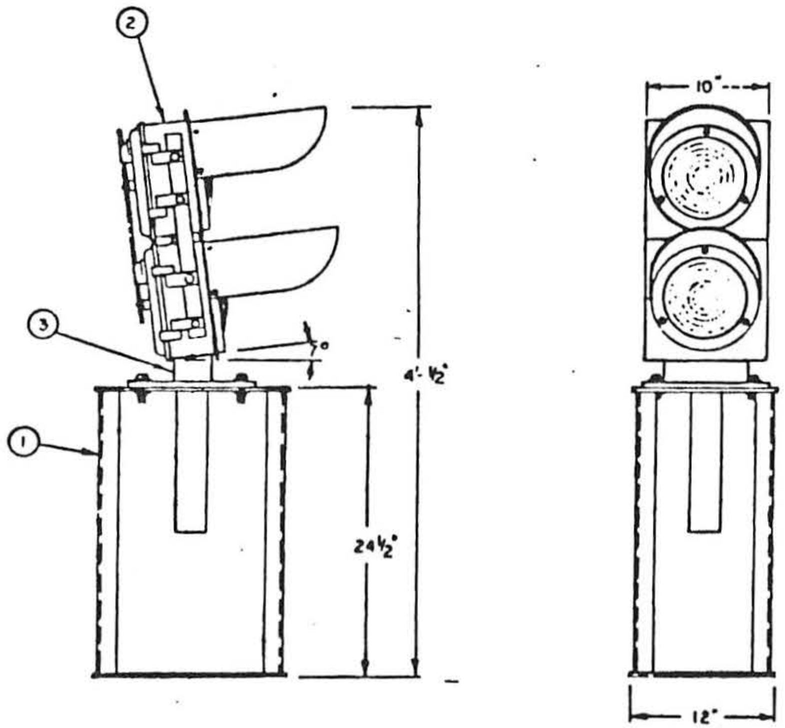
ITEM	QTY	PART Nº	DESCRIPTION
1	1	7001	PEDESTAL
2	1	7201-1	COVER
3	1	7202	BASE
4	2	1019-1	LENS MOUNTING RING
5	4	1028	4" GREEN LENS
6	4	1029	4" YELLOW LENS
7	2	7204	SHIELD
8	1		TERMINALS, 4 GANG (AAR)
9	6		6-32 X 1/4" SCREW
10	2		3/8"-16 X 5" BOLT, HEX HEAD
11	2		3/8" HEX NUT
12	2		3/8" FLATWASHER
13	2		3/8" LOCKWASHER


6 OR 7
3
4
3¾"
9
1
SPECIFY LENGTH
2
8
10
5
11 12 13 14

COLORLIGHT ELECTRIC BLUE FLAG SIGNAL
7210-X

ITEM	QTY	PART Nº	DESCRIPTION
1	1	7206	ALUMINUM PIPE
2	1	7205	PIPE BASE
3	1	72011	COVER
4	1	7202	BASE
5	2	1019 1	LENS MOUNTING RING
6	4	1029	4" YELLOW LENS
7	4	1030	4" BLUE LENS
8	2	7204	SHIELD
9	1		TERMINALS 4 GANG (AAR)
10	6		6-32 X 1/4" SCREW
11	2		3/8-16 X 5" BOLT HEX HEAD
12	2		3/8" HEX NUT
13	2		3/8" FLATWASHER
14	2		3/8" LOCKWASHER

ITEM	QTY		ION
1	1	[illegible]	
2	1	4502	
3	1	4522	COLORL



②
③
①
7°
4'-½"
24½"
10"
12"

L & W INDS INC

NONE

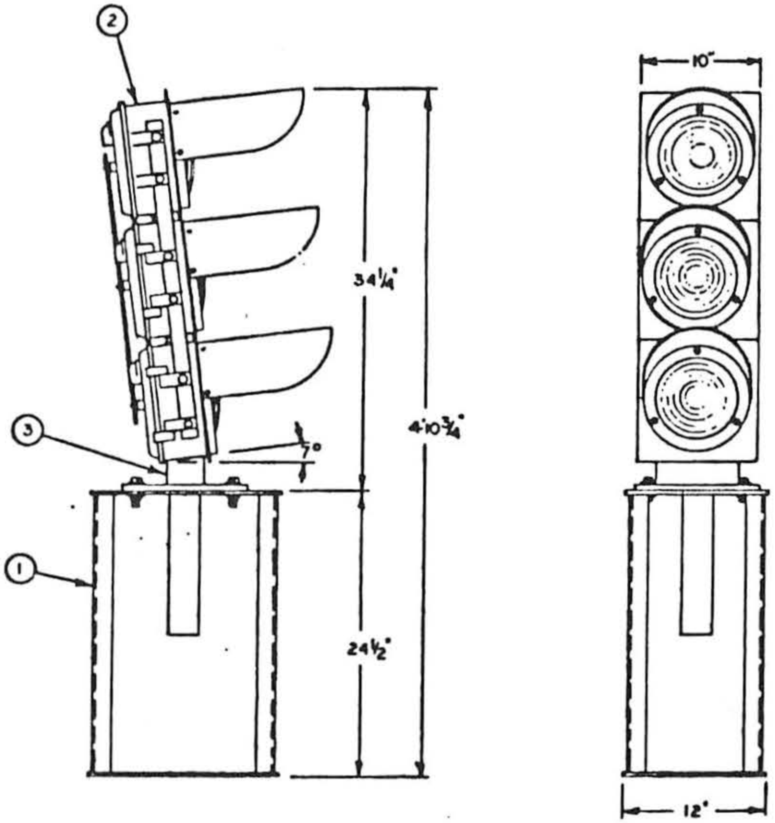
5-24-79

J C

2 POSITION DWARF COLORLIGHT SIGNAL

4522-X

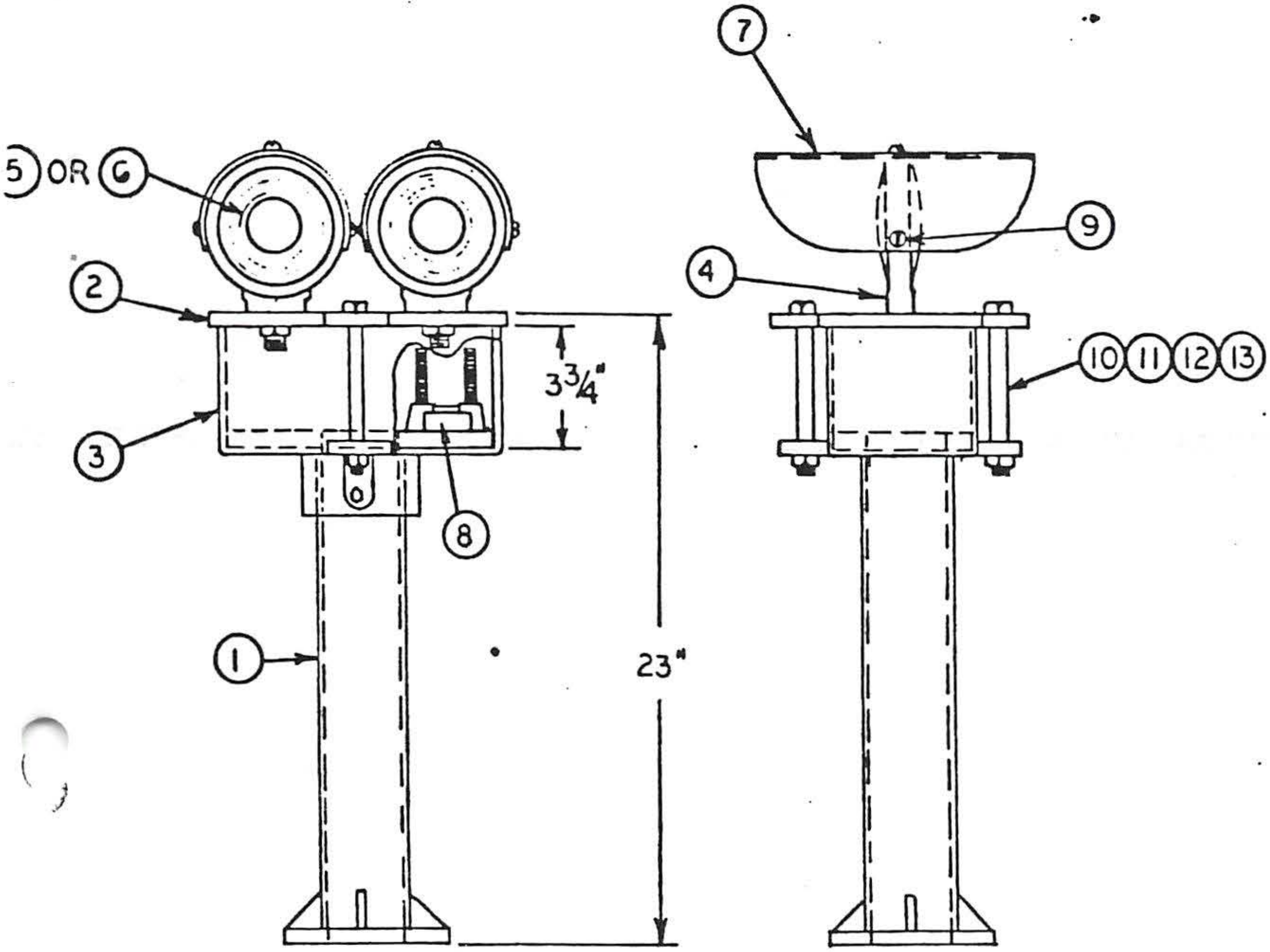
ITEM	QTY	PART Nº	DESCRIPTION
1	1	20133-X	DWARF FOUNDATION
2	1	4503-1X	3 POSITION COLORLIGHT
3	1	4522	COLORLIGHT SIGNAL MOUNT


②
③
①
34¼"
4'10¾"
24½"
7°
10"
12"

L & W INDS INC

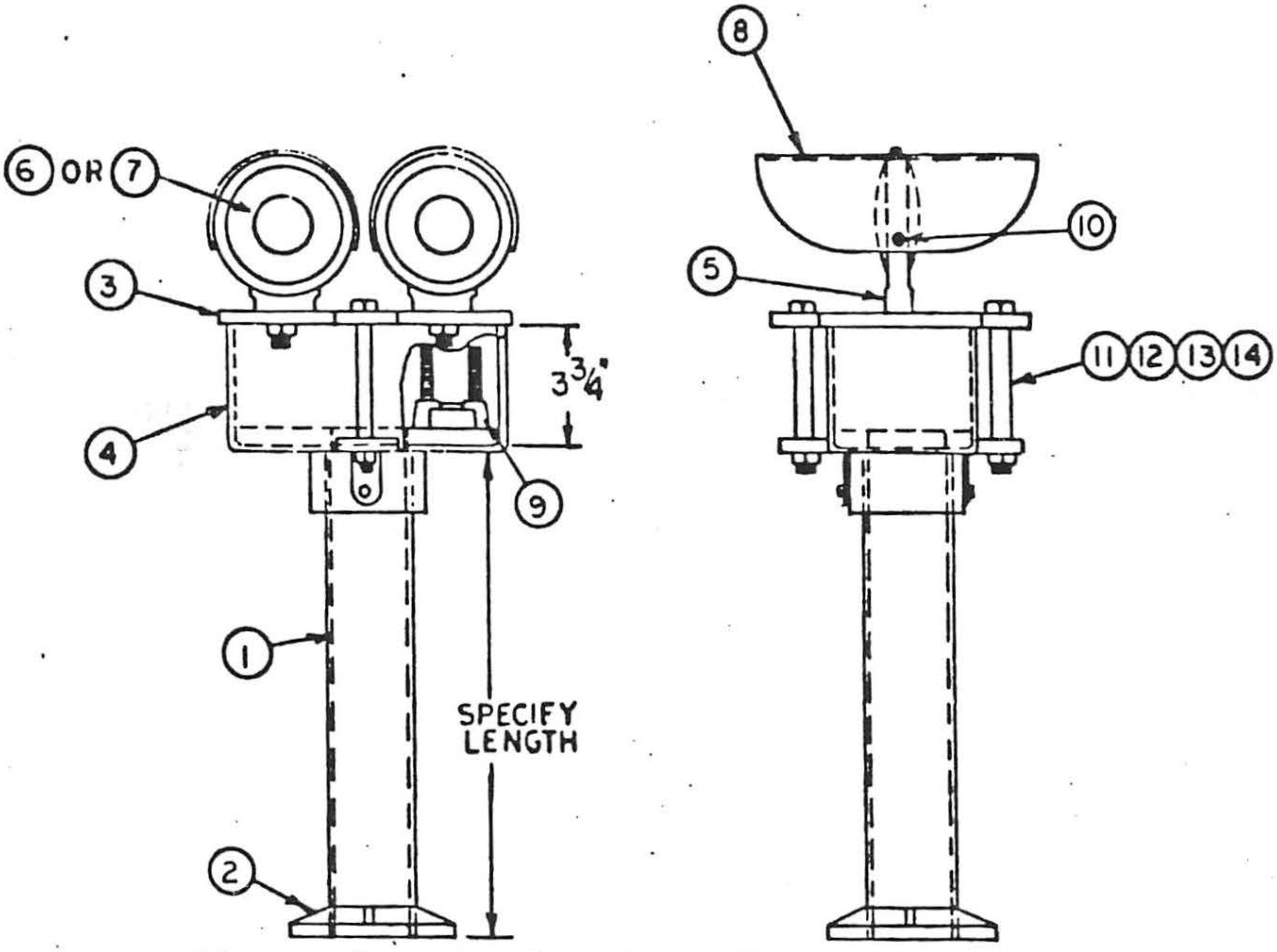
NONE
5-24-79
J C

3 POSITION DWARF COL GHT SIGNAL



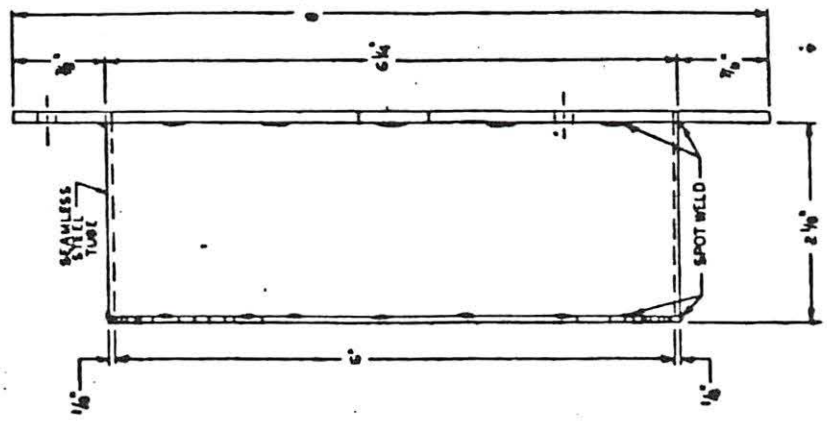
COLORLIGHT ELECTRIC SWITCH LAMP SIGNAL ASSEMBLY
7200-1X

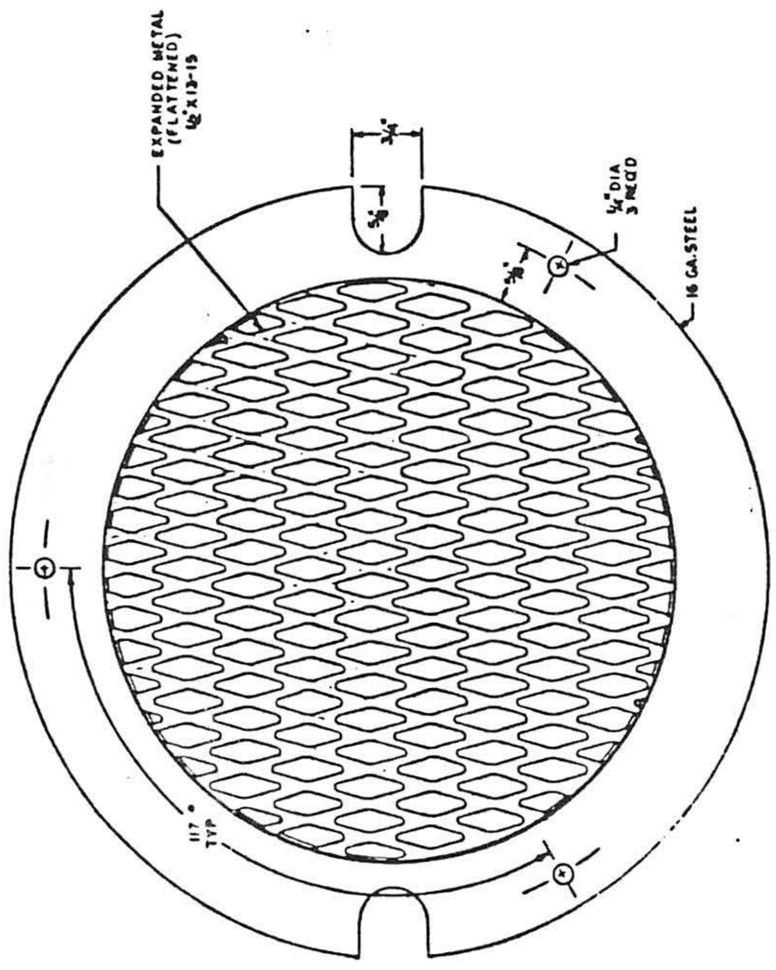
ITEM	QTY	PART Nº	DESCRIPTION
1	1	7001	PEDESTAL
2	1	7201-1	COVER
3	1	7202	BASE
4	2	1019-1	LENS MOUNTING RING
5	2	1028	4" GREEN LENS
6	2	1029	4" YELLOW LENS
7	2	7204	SHIELD
8	1		TERMINALS, 4 GANG (AAR)
9	6		6-32 X 1/4" SCREW
10	2		3/8"-16 X 5" BOLT, HEX HEAD
11	2		3/8" HEX NUT
12	2		3/8" FLATWASHER
13	2		3/8" LOCKWASHER


6 OR 7
3
4
1
2
9
3 3/4"
SPECIFY LENGTH
8
10
5
11 12 13 14

COLORLIGHT ELECTRIC BLUE FLAG SIGNAL
7210-X

ITEM	QTY	PART Nº	DESCRIPTION
1	1	7206	ALUMINUM PIPE
2	1	7205	PIPE BASE
3	1	7201 1	COVER
4	1	7202	BASE
5	2	1019 1	LENS MOUNTING RING
6	4	1029	4" YELLOW LENS
7	4	1030	4" BLUE LENS
8	2	7204	SHIELD
9	1		TERMINALS 4 GANG (AAR)
10	6		6-32 X 1/4" SCREW
11	2		3/8-16 X 5" BOLT HEX HEAD
12	2		3/8" HEX NUT
13	2		3/8" FLATWASHER
14	2		3/8" LOCKWASHER


8"
6¼"
7/8"
7/8"
SEAMLESS STEEL TUBE
SPOT WELD
2 1/8"
6"
1/16"
1/16"


EXPANDED METAL (FLATTENED) ½"X13-15
3/4"
5/8"
5/16"
¼" DIA 3 REQ'D
16 GA.STEEL
117° TYP

NOTE:
PAINT FLAT BLACK

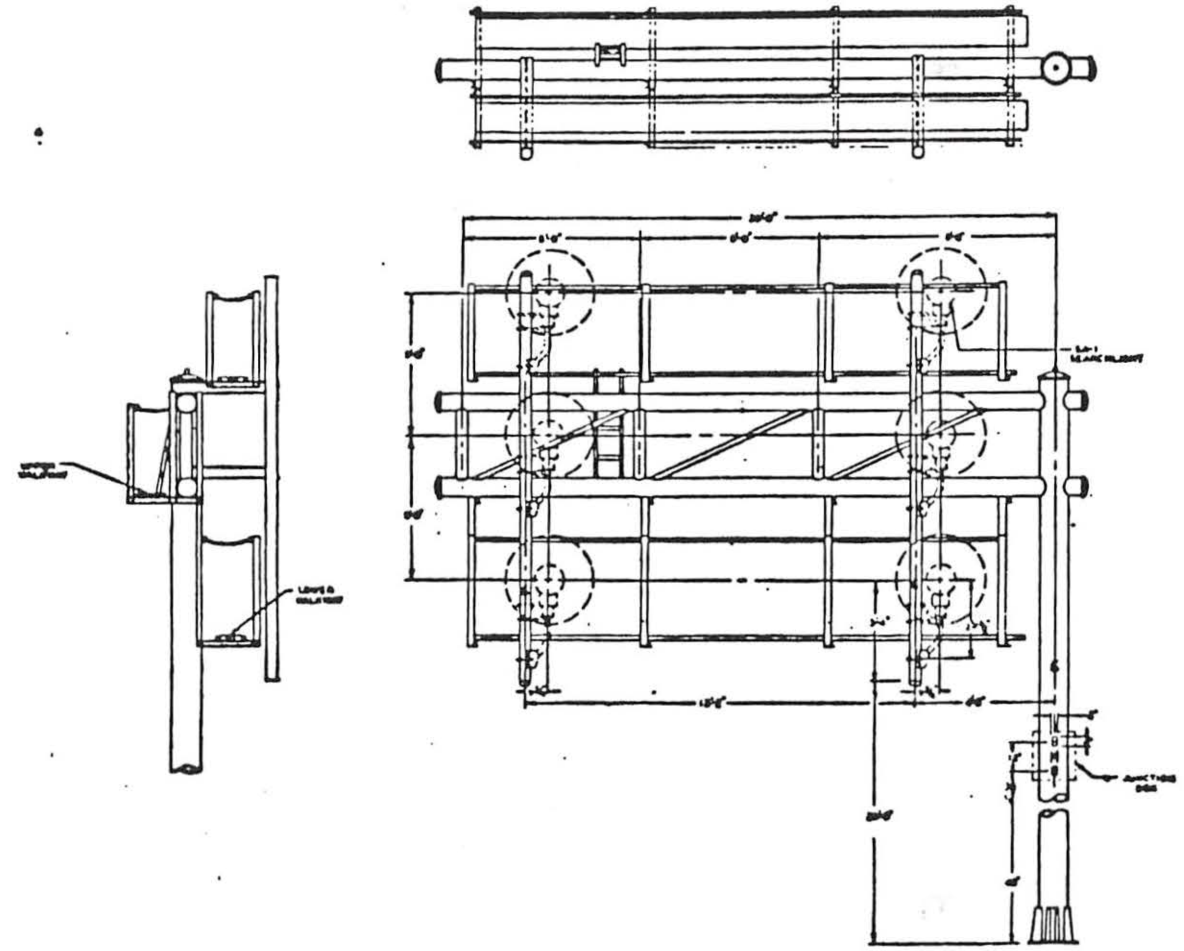
L&W INDS., INC.

SCALE: FULL
DATE: 6-12-78
APPROVED BY:
DRAWN BY J.
REVISED 4-23-78

DWARF SIGNAL LENS PROTECTOR

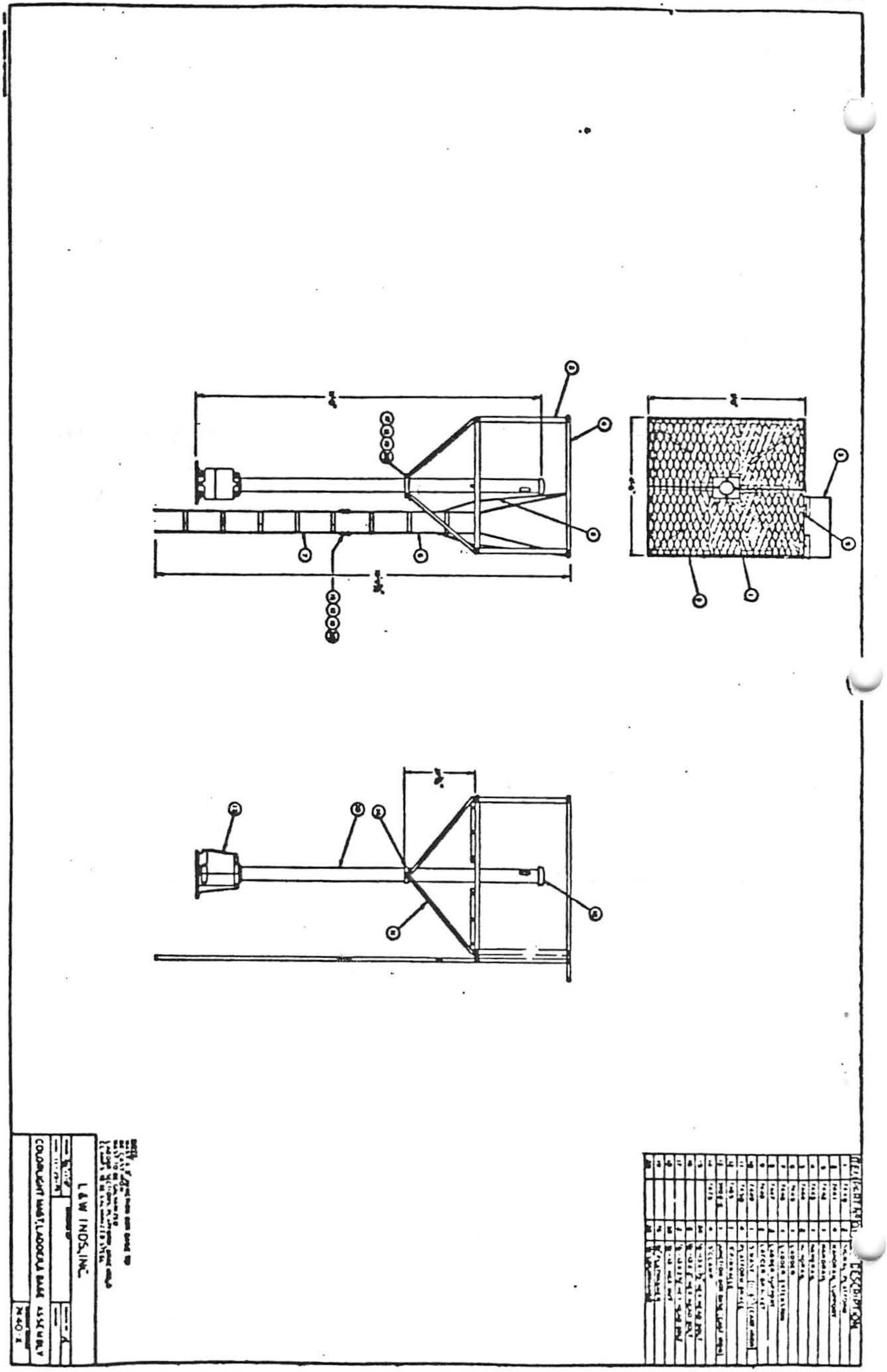
N-2 US.& S.

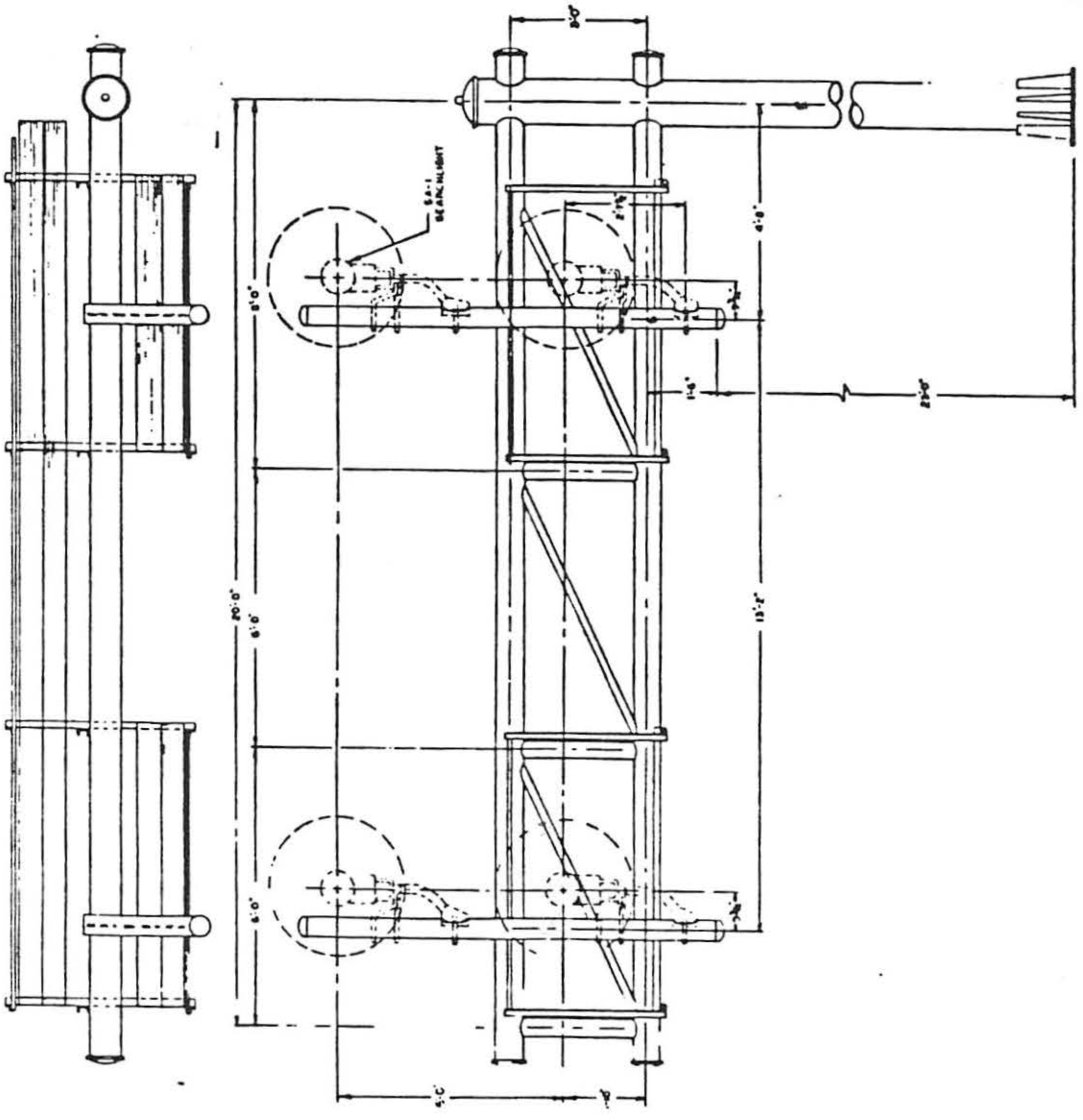
DRAWING NUMBER
1780


20'-0"
6'-0"
6'-0"
13'-6"
4'-6"
LOWER WALKWAY
UPPER WALKWAY
JUNCTION BOX

L&W INDS INC

CANTILEVER ASSEMBLY

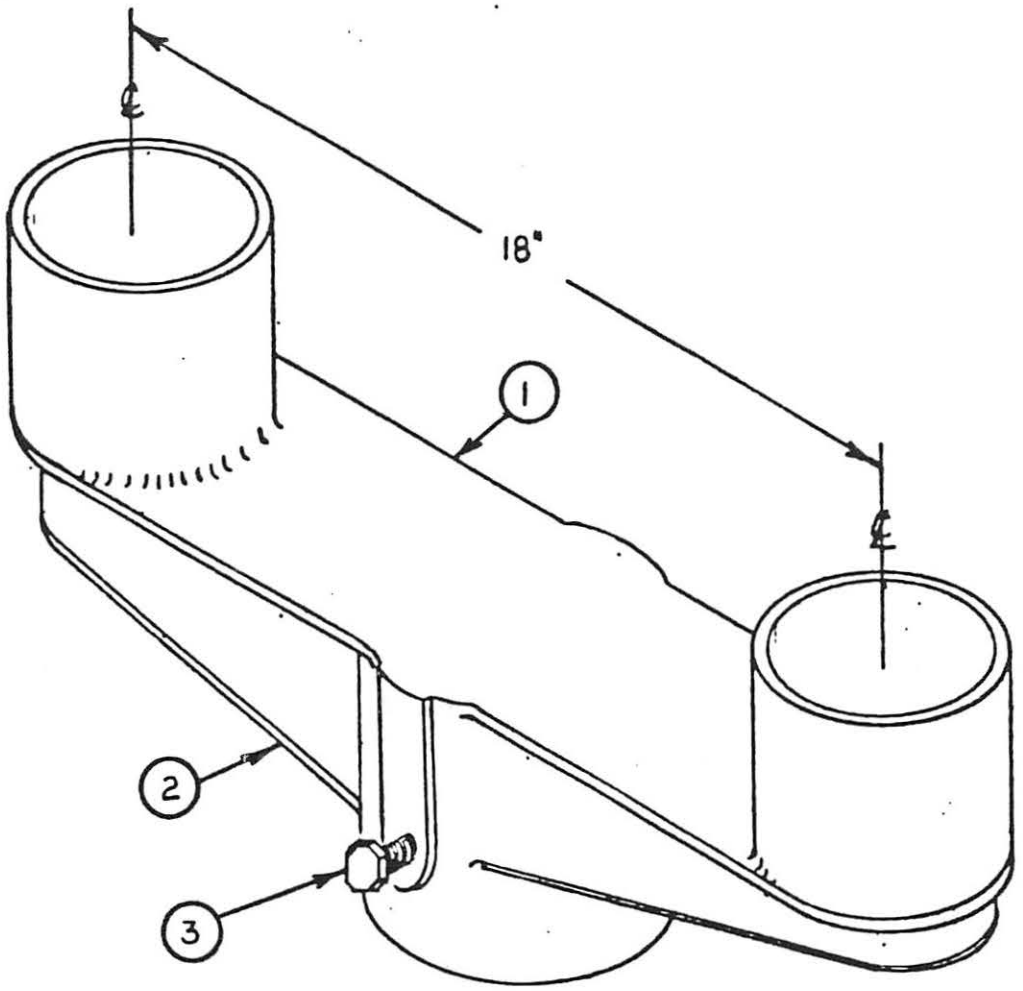

DESCRIPTION
L&W INDS, INC.
COLORLIGHT MAST, LADDER & BASE ASSEMBLY
M40-X


3'-0"
8'-0"
20'-0"
6'-0"
6'-0"
4'-0"
13'-2"
1'-6"
23'-0"
SA-1
BEAM HEIGHT

L&H INDS, INC.

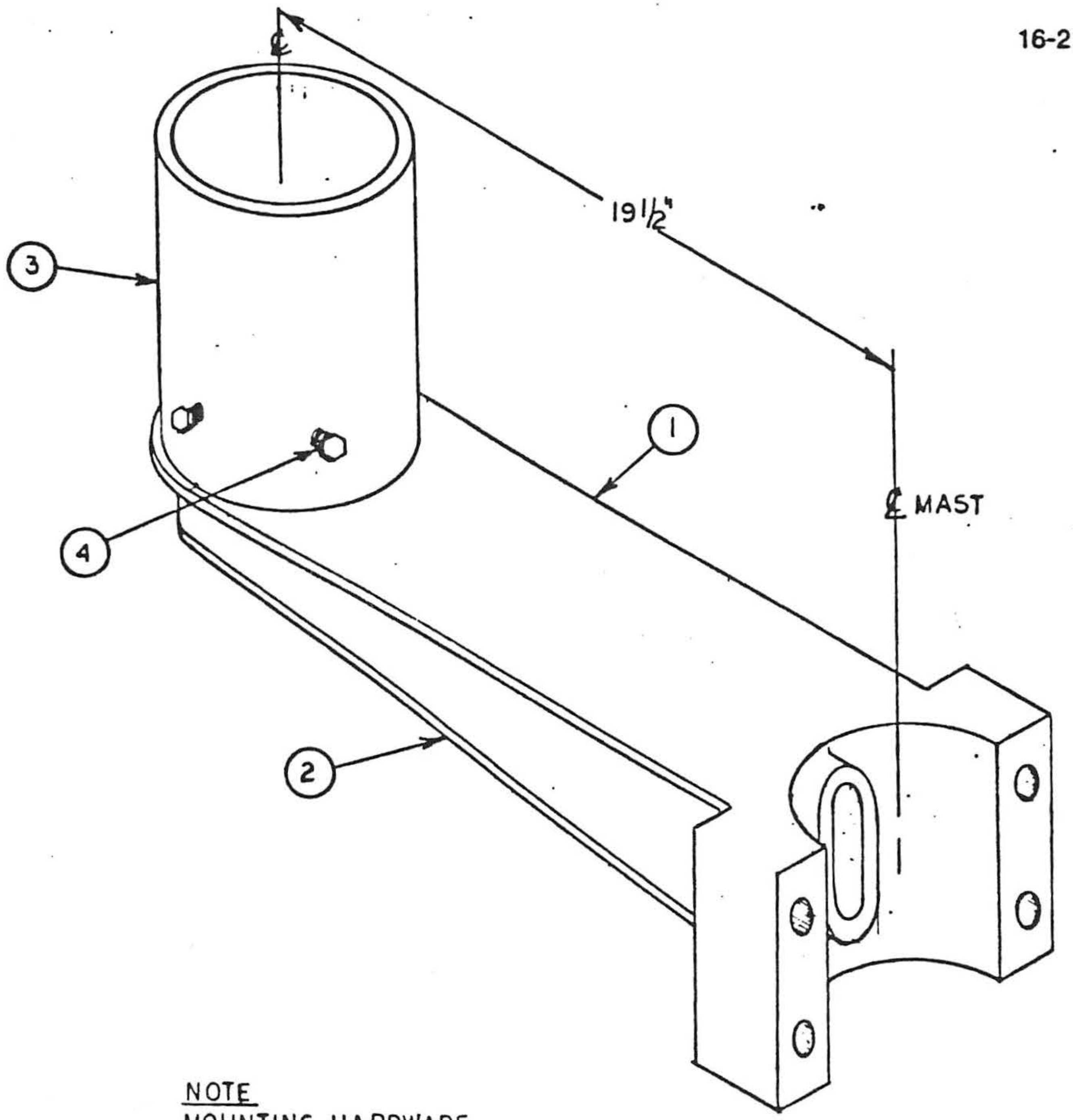
CANTILEVER ASSEMBLY

NOV. 1979



BACK TO BACK SIGNAL MOUNT
(TOP OF MAST)
4595-X

ITEM	PART Nº	QTY	DESCRIPTION
1	4595	1	BACK TO BACK SIGNAL CASTING
2	4596	2	WIRE CHASE COVER
3		4	1/2-13 X 1½" HEX HEAD BOLT

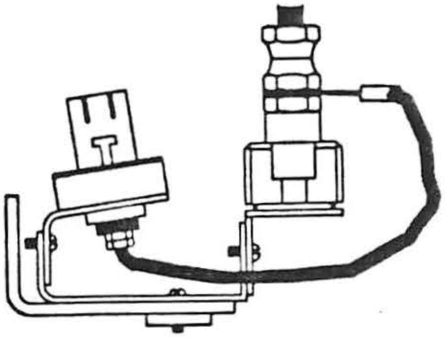


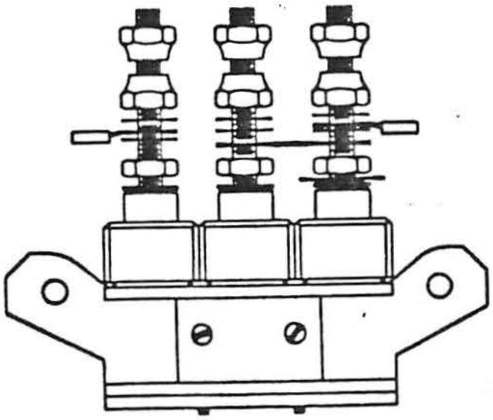
NOTE
MOUNTING HARDWARE
INCLUDED WITH CASTING.

STANDOFF SIGNAL MOUNT
4601-X

ITEM	PART Nº	QTY	DESCRIPTION
1	4601	1	STANDOFF CASTING
2	4602	1	WIRE CHASE COVER
3		1	5" SLEEVE (SPECIFY LENGTH)
4		4	½-13 X 1½" HEX HEAD BOLT

P5, N2, & R2 RETROFIT OPTICAL ASSEMBLY





- PRECISE FOCUSING & ALIGNMENT
- EASY ACCESS TO ADJUSTMENTS
- LOW PROFILE
- SEALABLE ADJUSTMENTS
- FITS P5, N2, & R2 SIGNAL HEADS
- EXCEEDS RECOMMENDED AAR DIELECTRIC LEVELS

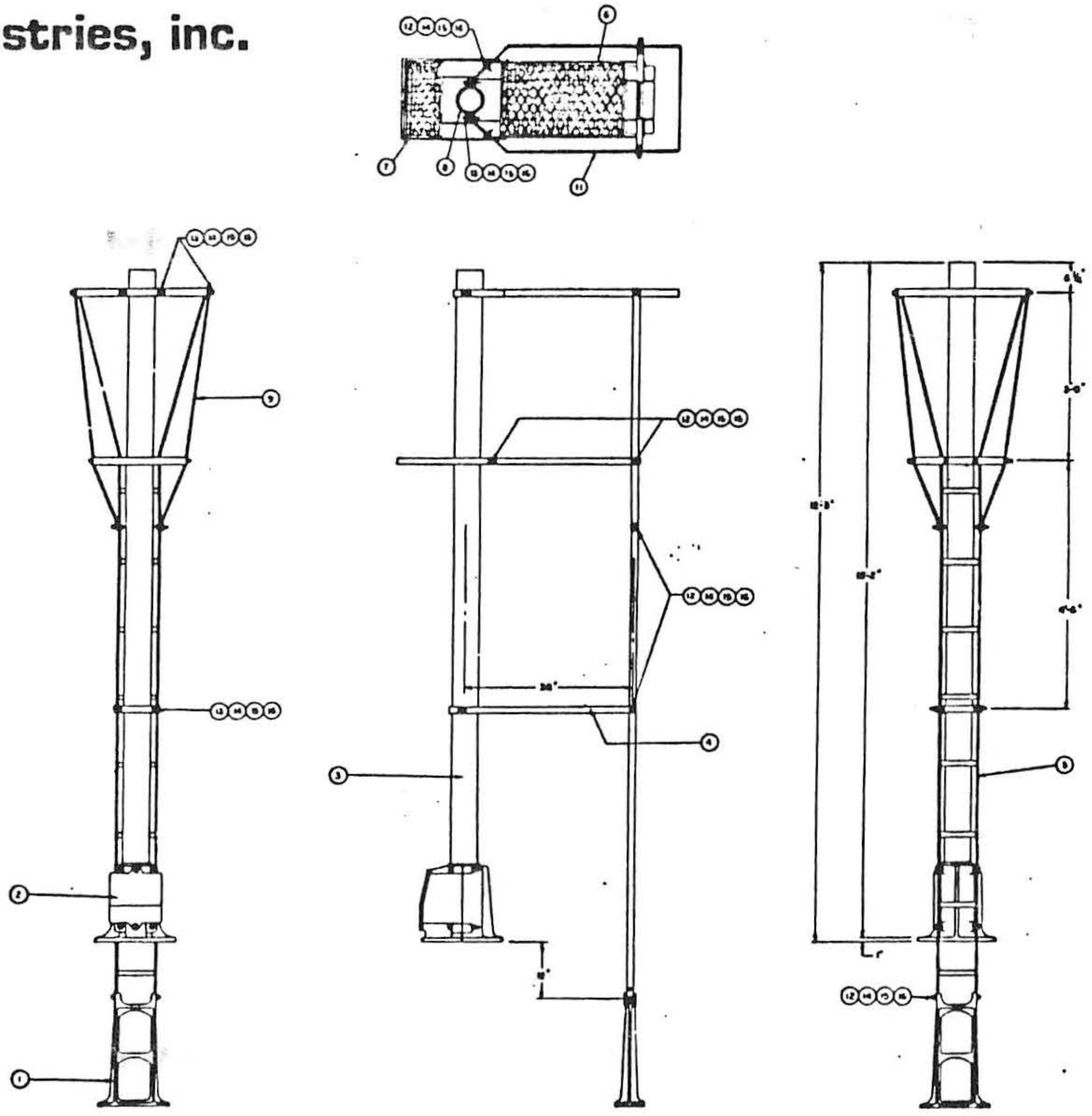
The L&W P5, N2, & R2 Retrofit Optical Assembly is designed and manufactured for precise optical alignment of a signal bulb with the doublet lens assemblies of P5, N2, & R2 colorlight signals. The unit has full adjustment in each of the focus and alignment axis to obtain the optimal focus point with any bulb, thereby maximizing light output for each signal. The wire terminals are mounted up and out of the way to provide easy access to the focus adjustments while maintaining a low installation profile. Adjustments can be sealed to protect against tampering.

The unit is precisely manufactured for high and continuous quality. An automatic insertion machine assures accurate socket placement every time. Controlled forming assures precise parts for consistent focusing.

L&W industries, inc.
3149 E. Chestnut Expressway
Springfield, MO 65802

L&W industries, inc.

ITEM NO	PART NO.	QTY	DESCRIPTION
1	7400	1	LADDER FOUNDATION
2	5900-4	1	JUNCTION BOX BASE ASSEMBLY
3	7450	1	5' MAST
4	7455	2	STAY SIDE
5	7460	1	LADDER
6	7465-7	1	REAR PLATFORM ASSEMBLY
7	7470-7	1	FRONT PLATFORM ASSEMBLY
8	7475	6	STAY CLAMP
9	7480	2	LADDER TOP BRACE
11	7490	1	TOP HANDRAIL
12		14	1/2"-13 x 1" HEX HEAD SCREW
13		8	1/2"-13 x 1 1/2" HEX HEAD SCREW
14		22	1/2" FLAT WASHER
15		22	1/2" LOCK WASHER
16		22	1/2" BOLT



12 14 15 16
6
7
8
13 14 15 16
11
12 14 15 16
9
13 14 15 16
2
1
12 14 15 16
12 14 15 16
30"
4
3
12"
12'-3"
10'-2"
6 1/2"
3'-0"
4'-6"
5
12 14 15 16

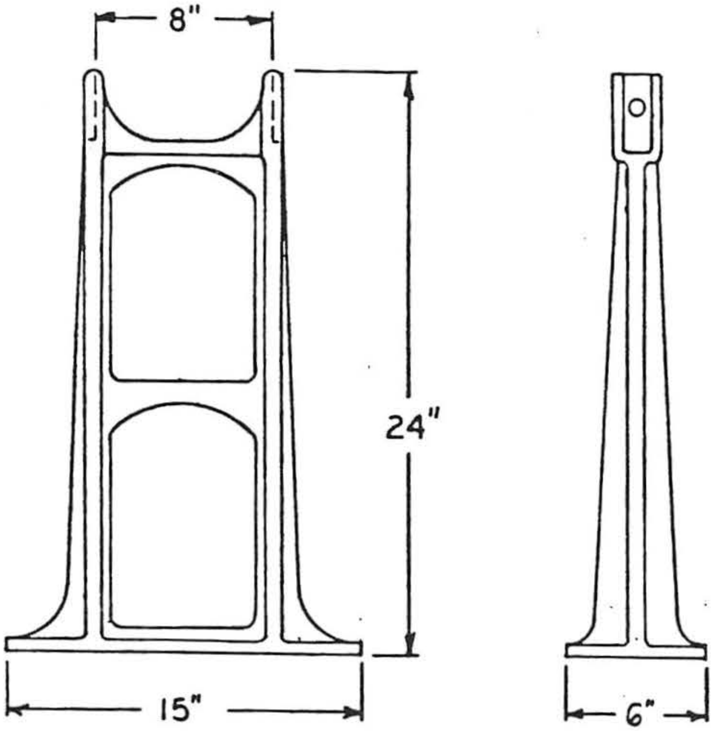
L&W industries, inc.

10-4-7
1-11-79

SIGNAL MAST ASSEMBLY

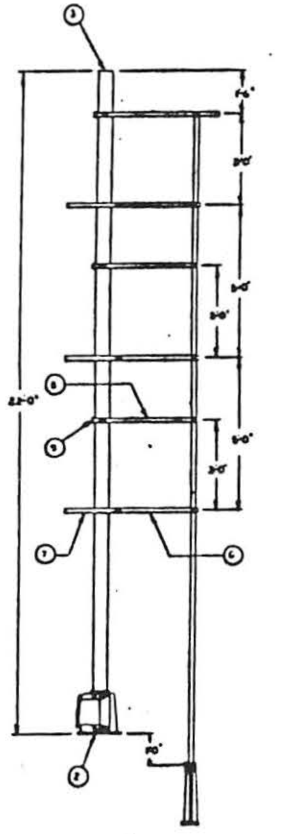
TOP OF POST MAST

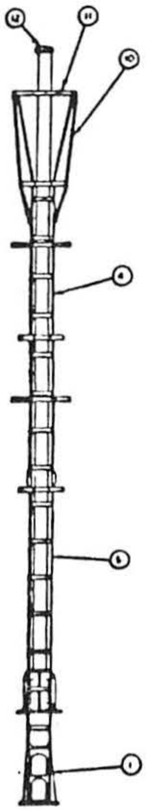
7401-X



7400
LADDER FOUNDATION

ITEM Nº	PART Nº	QTY	DESCRIPTION
1	7400	1	LADDER FOUNDATION
2	6500-X	1	JUNCTION BOX BASE ASSEMBLY
3		22 FT	5" MAST
4	74LC-1	1	LADDER
5	7450	1	LADDER EXTENSION
6	7465-X	3	REAR PLATFORM ASSEMBLY
7	7470-X	3	FRONT PLATFORM ASSEMBLY (OPTIONAL)
8	7495	6	INTERMEDIATE HANGERS
9	7475	12	STAY CLAMP
10	7480	2	LADDER TOP BRACE
11	7490	1	TOP HANDRAIL
12	7485	1	5" PINNACLE
		20	1/2-13 x 1" HEX HEAD BOLT
		16	1/2-13 x 1 1/2 HEX HEAD BOLT
		36	1/2" FLAT WASHER
		36	1/2" LOCK WASHER
		36	1/2" NUT





L & W INDS INC

SCALE 1/8" = 1'-0"

DATE 2 16 79

DRAWN BY X

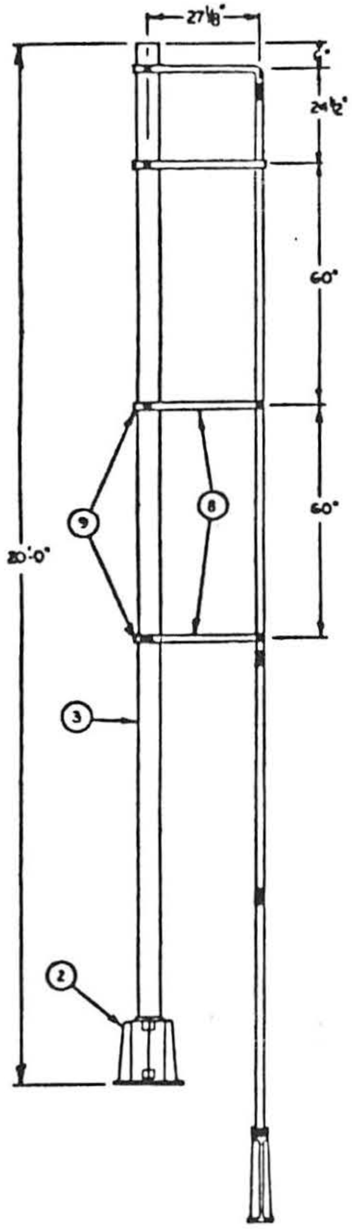
SIGNAL MAST ASSEMBLY

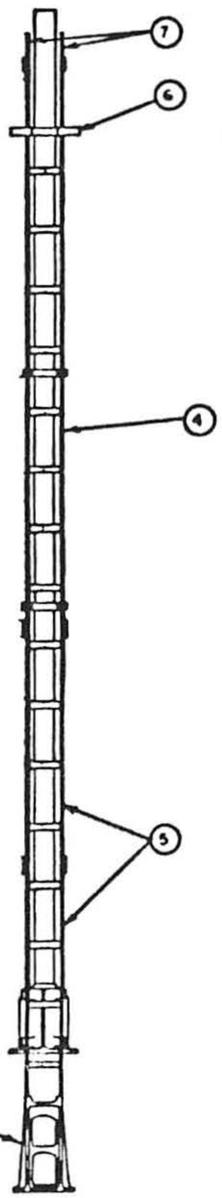
SIDE OF MAST MOUNT

7413-X

NOV. 1979

ITEM Nº	PART Nº	QTY	DES[illegible]N
1	7400	1	LADDER FOUN[illegible]ON
2	5910-X	1	SINGLE SPLIT BASE ASSEMBLY
3		20 FT	5" MAST
4	7530	1	LADDER
5	7511	2	LADDER EXTENSION
6	7466-X	1	REAR PLATFORM ASSEMBLY
7	7491	2	TOP HANDRAIL 1LH & 1RH
8	7456	4	STAY SIDE
9	7475	8	STAY CLAMP
		28	1/2-13 X 1" HEX HEAD BOLT
		28	1/2" FLAT WASHER
		28	1/2" LOCK WASHER
		28	1/2" NUT



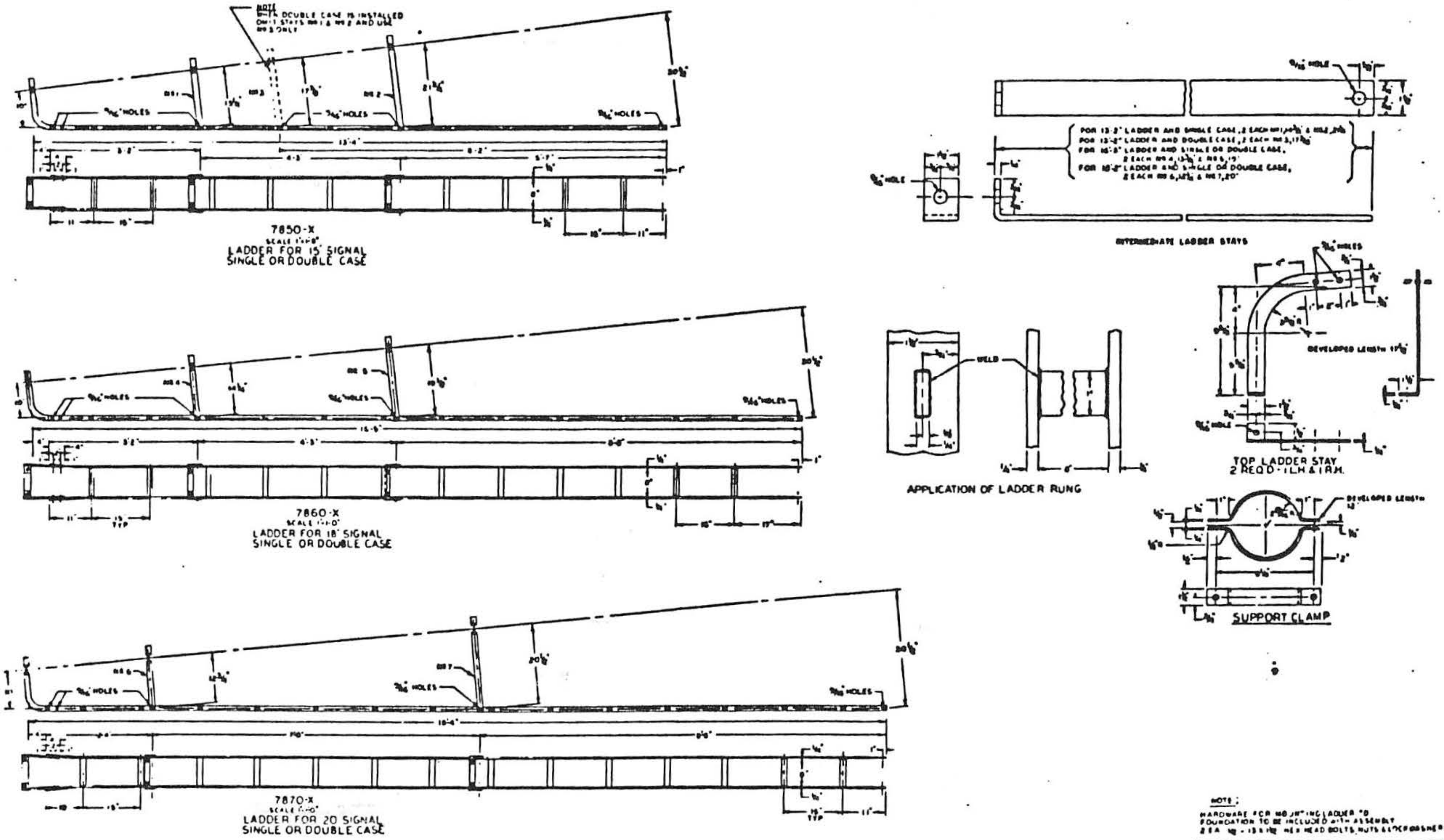


L&W INDS.,INC.

NONE
2-27-79
JC

SIGNAL MAST ASSEMBLY

7423-X


NOTE
WITH DOUBLE CASE IS INSTALLED
OMIT STAYS NO 1 & NO 2 AND USE
NO 3 ONLY
NO 1
NO 3
NO 2
9/16" HOLES
13'-4"
7850-X
SCALE 1"=1'-0"
LADDER FOR 15' SIGNAL
SINGLE OR DOUBLE CASE
NO 4
NO 5
15'-9"
7860-X
SCALE 1"=1'-0"
LADDER FOR 18' SIGNAL
SINGLE OR DOUBLE CASE
NO 6
NO 7
7870-X
SCALE 1"=1'-0"
LADDER FOR 20 SIGNAL
SINGLE OR DOUBLE CASE
9/16" HOLE
FOR 13'-2" LADDER AND SINGLE CASE, 2 EACH NO 1, 10 3/16" & NO 2, 21 3/16"
FOR 13'-2" LADDER AND DOUBLE CASE, 2 EACH NO 3, 17 3/16"
FOR 15'-3" LADDER AND SINGLE OR DOUBLE CASE,
2 EACH NO 4, 13 3/16" & NO 5, 19"
FOR 18'-2" LADDER AND SINGLE OR DOUBLE CASE,
2 EACH NO 6, 12 3/16" & NO 7, 20"
INTERMEDIATE LADDER STAYS
WELD
APPLICATION OF LADDER RUNG
9/16" HOLES
DEVELOPED LENGTH
TOP LADDER STAY
2 REQ'D - 1 LH & 1 RH.
DEVELOPED LENGTH
SUPPORT CLAMP

NOTE:
HARDWARE FOR MOUNTING LADDER TO
FOUNDATION TO BE INCLUDED WITH ASSEMBLY
2 EA 1/2 - 13 x 1 1/2 HEX HEAD BOLTS, NUTS & LOCKWASHERS

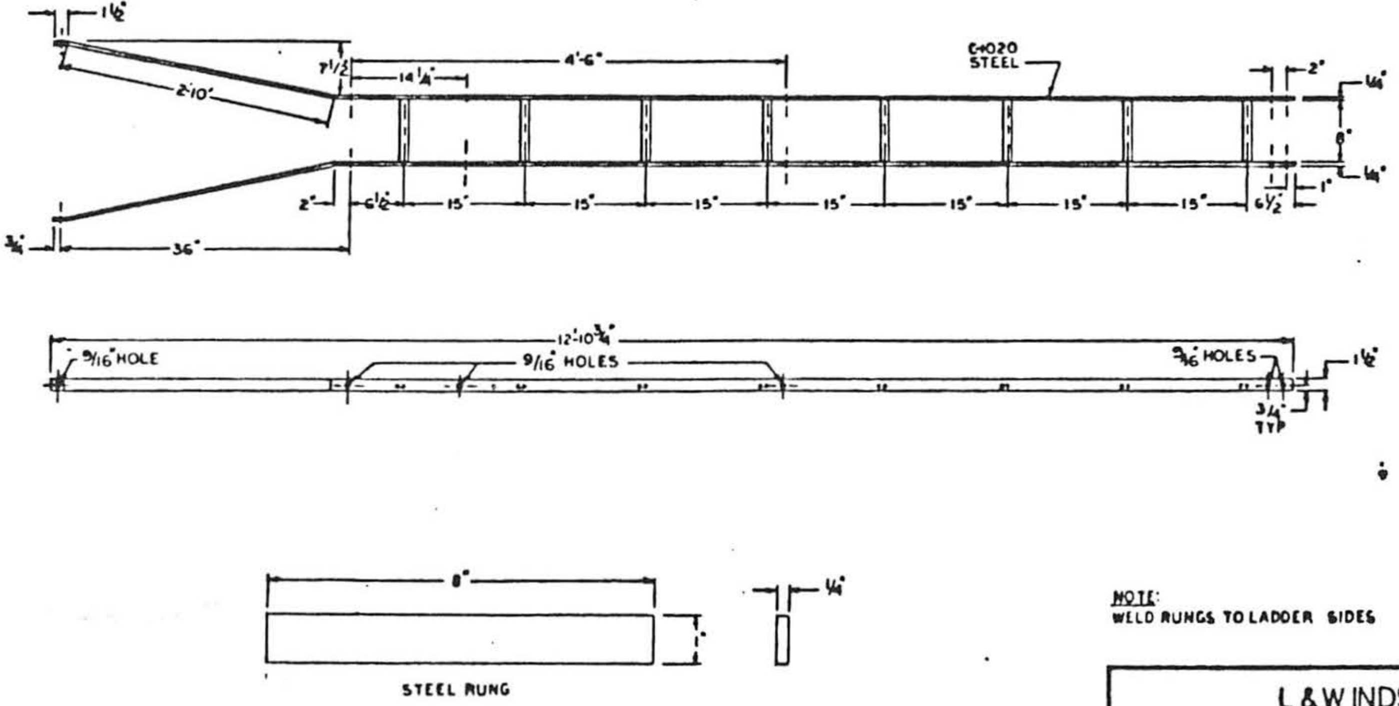
L&W INDS, INC.

AS NOTED
1-5-79
JC
1-19-79

SIGNAL LADDERS

7850,60,70-X

NOV. 1979


1½"
2'-10"
7½"
14¼"
4'-6"
C-1020 STEEL
2"
¼"
8"
¼"
1"
2"
6½"
15"
15"
15"
15"
15"
15"
15"
6½"
¾"
36"
12'-10¾"
9/16" HOLE
9/16" HOLES
9/16" HOLES
1½"
¾" TYP
8"
1"
¼"
STEEL RUNG

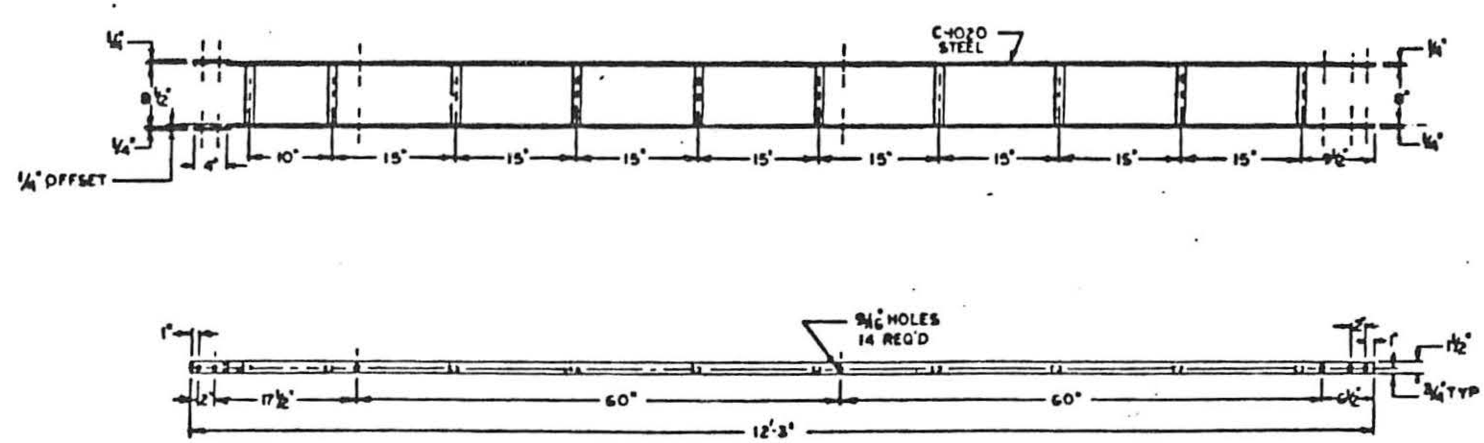
NOTE:
WELD RUNGS TO LADDER SIDES

L & W INDS INC

1.0' : 1'-0"
2-22-78
JC

LADDER

7460


C-1020 STEEL
1/4"
8 1/2"
1/4"
1/4" OFFSET
4"
10"
15"
15"
15"
15"
15"
15"
15"
15"
9 1/2"
1/4"
8"
1/4"
9/16" HOLES 14 REQ'D
1"
2"
17 1/2"
60"
60"
6 1/2"
12'-3"
2"
1"
1 1/2"
3/4" TYP

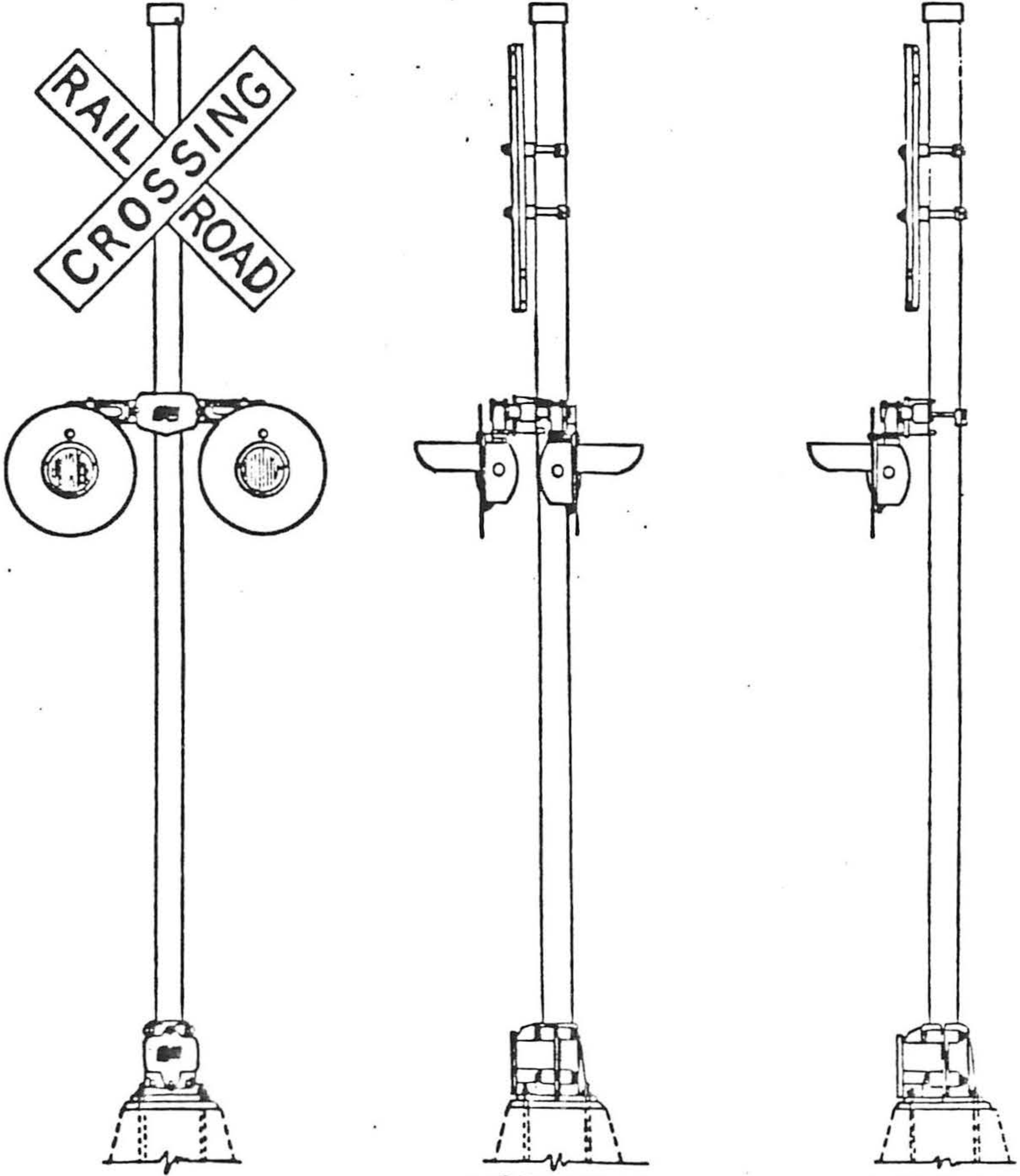
L&W INDS.,INC.

1"=1'-0"
2 23 79
JC

LADDER

7530

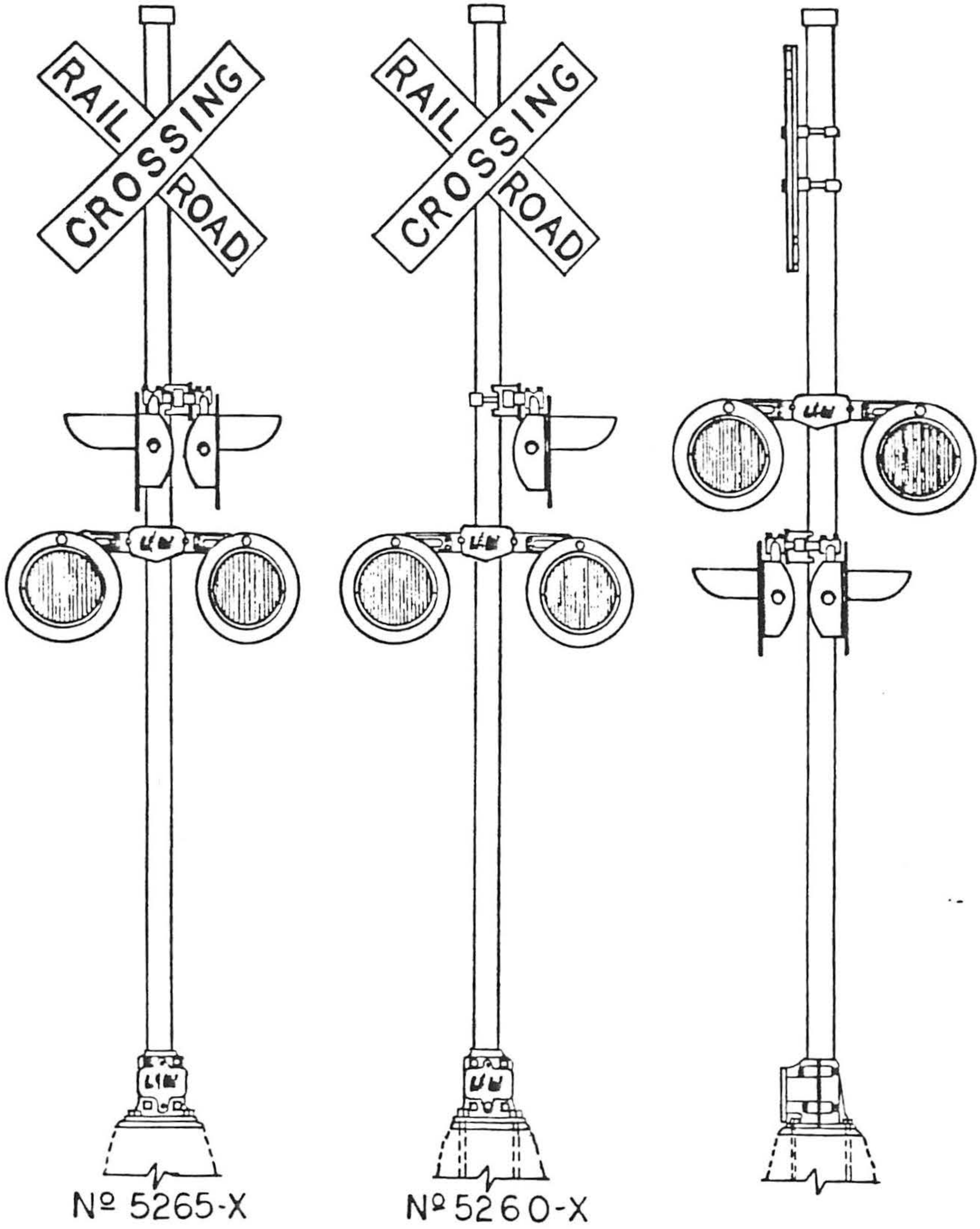
NOV. 1979


RAILROAD
CROSSING

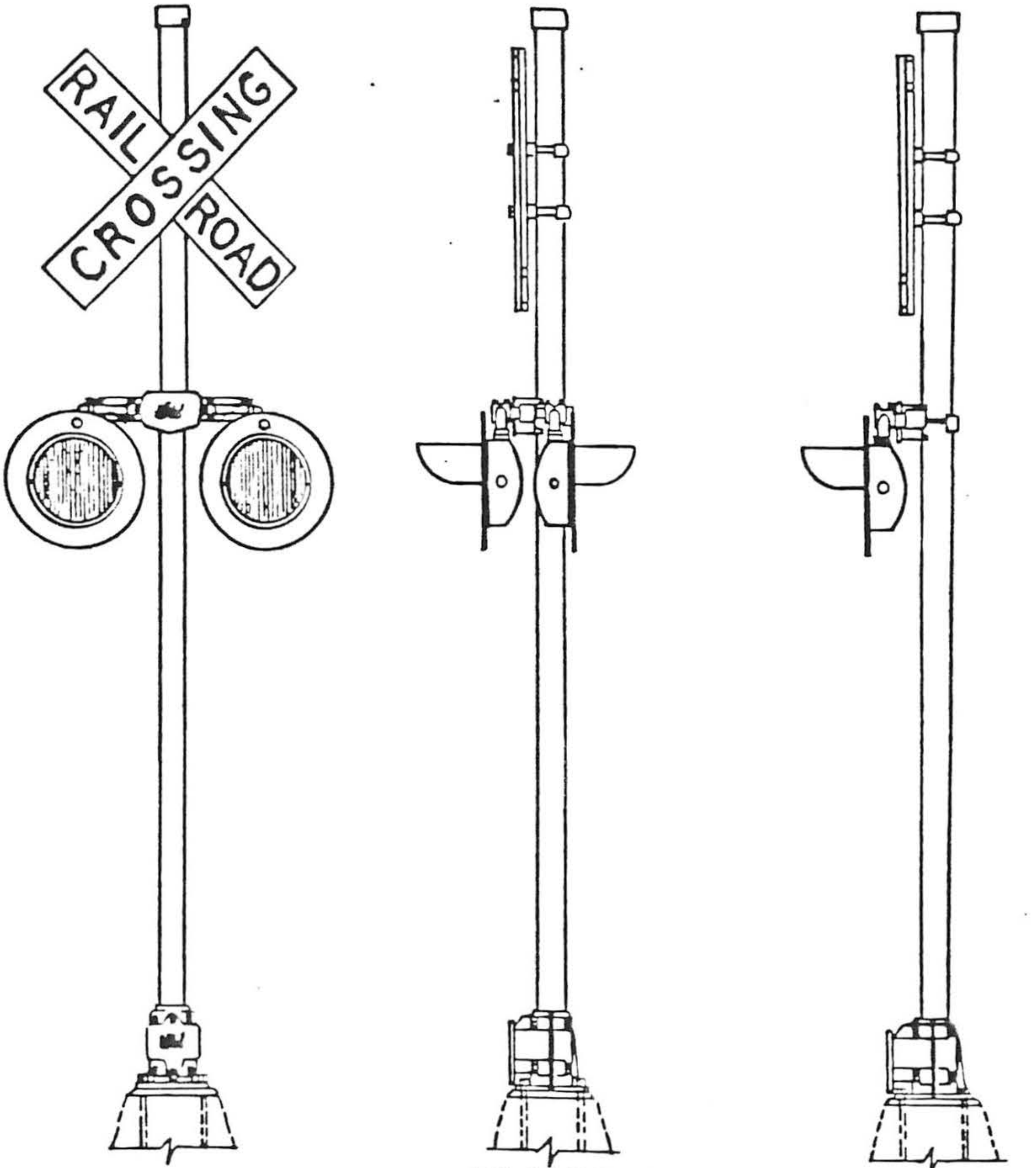
N°5070-X

N°5050-X

FLASHING LIGHT
HIGHWAY CROSSING SIGNALS


RAIL
CROSSING
ROAD
RAIL
CROSSING
ROAD
Nº 5265-X
Nº 5260-X

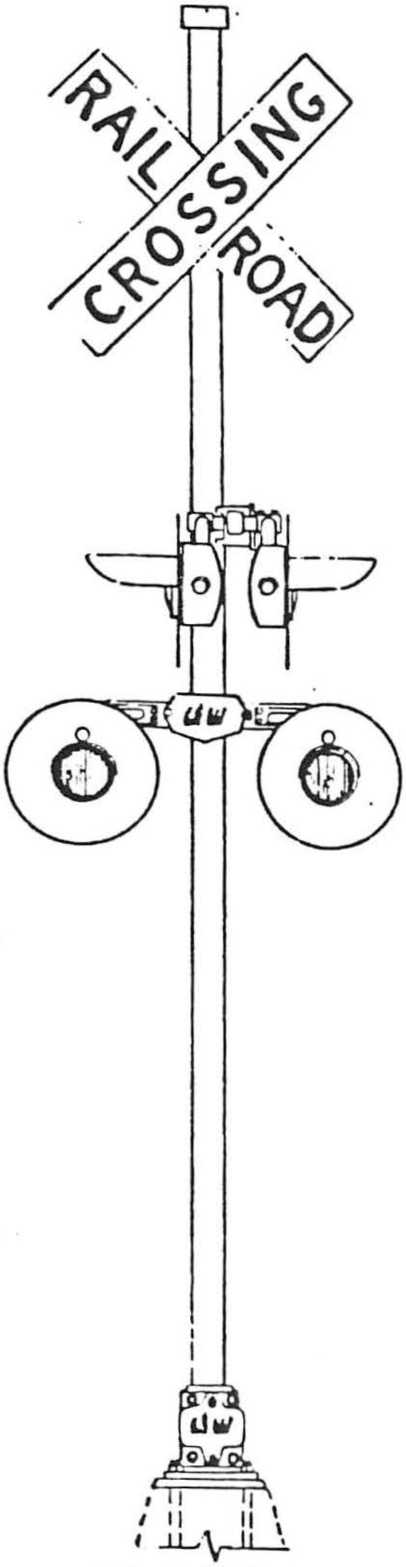
12" FLASHING LIGHT
HIGHWAY CROSSING SIGNALS


RAIL ROAD
CROSSING

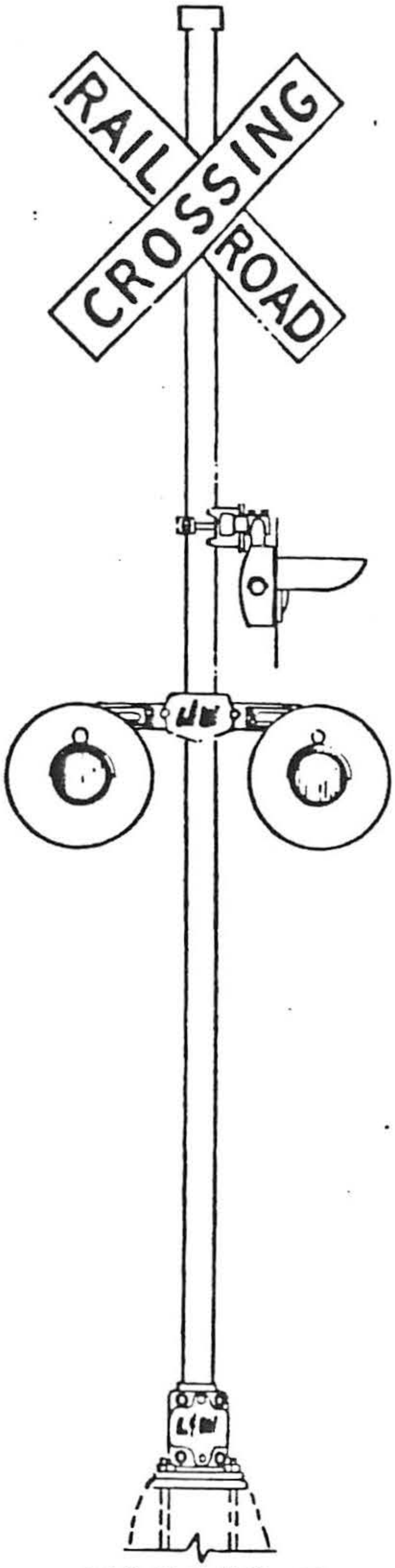
Nº 5270-X

Nº 5250-X

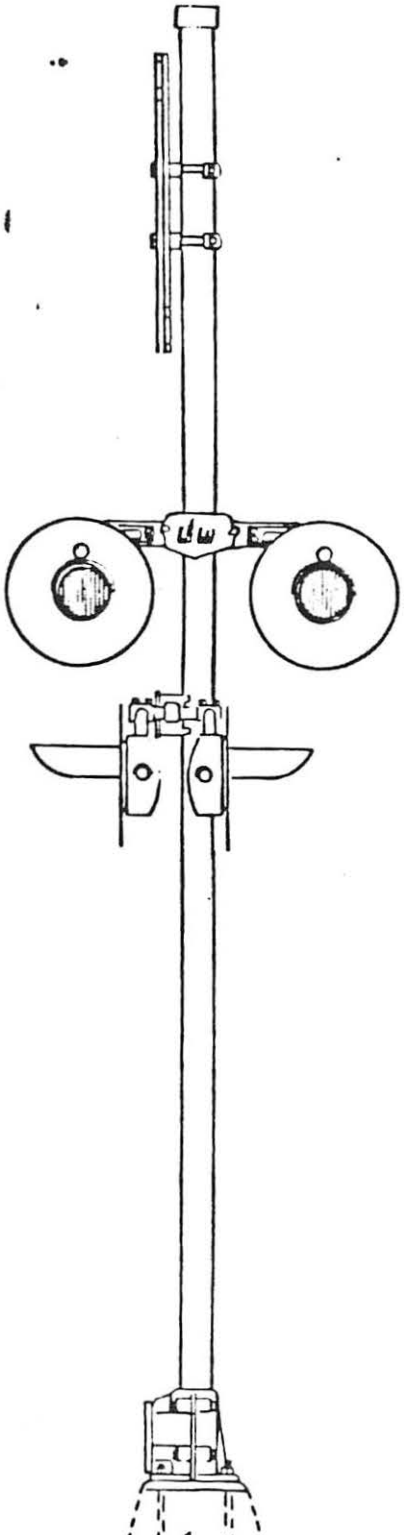
12" FLASHING LIGHT
HIGHWAY CROSSING SIGNALS


RAIL ROAD
CROSSING

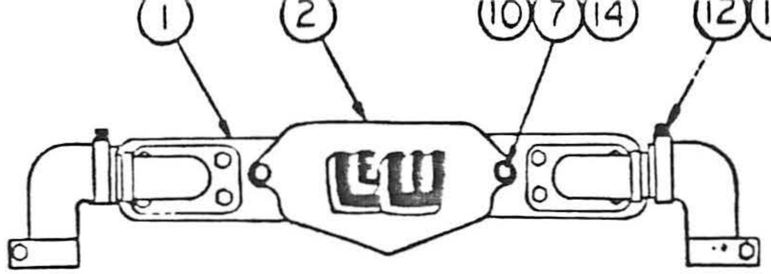
Nº 5065-X

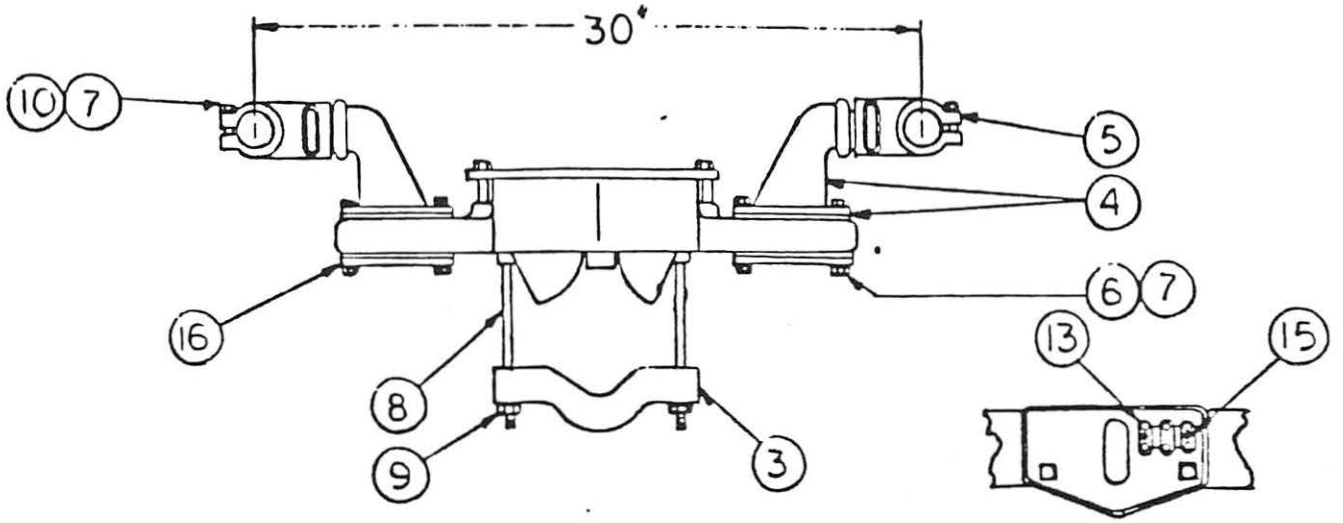

RAIL ROAD
CROSSING

Nº 5060-X



FLASHING LIGHT HIGHWAY CROSSING SIGNALS





6000-X
JUNCTION BOX CROSS ARM ONE WAY INDICATION

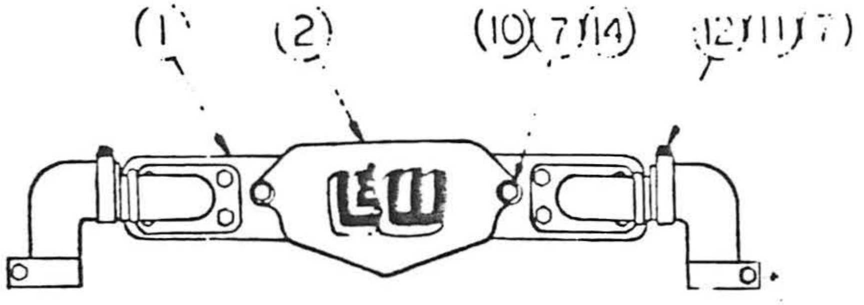
FOR 4" OR 5" PIPE

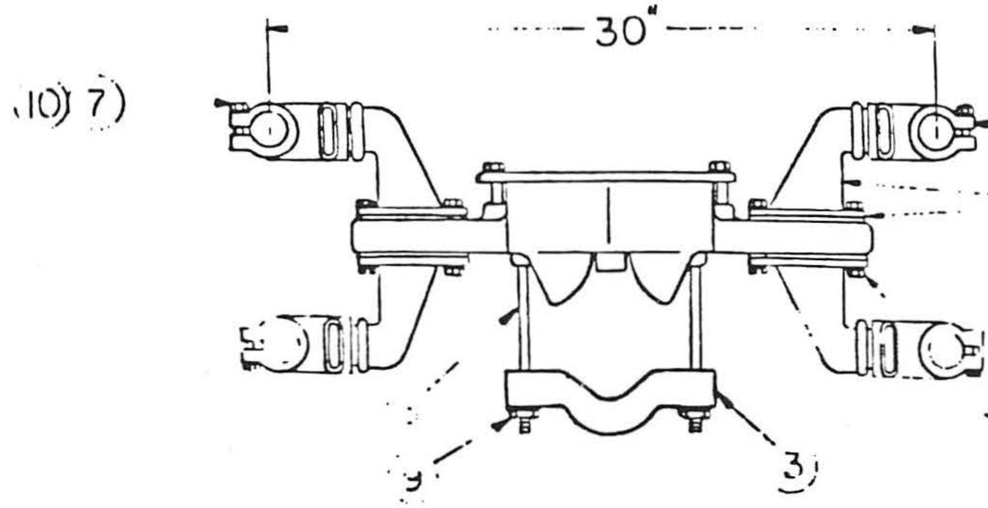
KEY	AMT.	PART Nº	DESCRIPTION
1	1	6001	JCT. BOX CROSS ARM
2	1	6002	COVER and 6002-A GASKET
3	1	6003	ADAPTOR CLAMP
4	2	6004	EXTENSION BRACKET 3½" and GASKET
5	2	6005	SUPPORT BRACKET
6	16	REF. A	HEX BOLT 3/8-16×1" LG.
7	24	REF. B	LOCKWASHER 3/8 SPLIT
8	2	REF. C	SQ. HD BOLT (SPECIFY PIPE SIZE)
9	2	REF. D	HEX NUT 5/8-11 and LOCKWASHER
10	4	REF. E	HEX HD. CAPSCREW 3/8-16 × 2" LG.
11	4	REF. F	HEX NUT 3/8-16
12	2	REF. G	U-BOLT & STRAP
13	1	REF. H	TERMINAL BLOCK (A.A.R. 3-WAY)
14	2	REF. I	FLAT WASHER 3/8
15	2	REF. J	RD HD SLOTTED SCR. #10-32×1/2 LG.
16	2	6006	COVER PLATE and GASKET

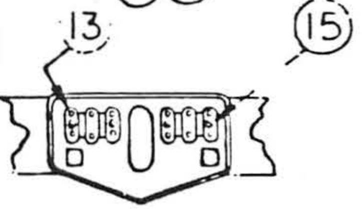
DWG Nº 6000

L&W Industries, inc.

NOV. 19





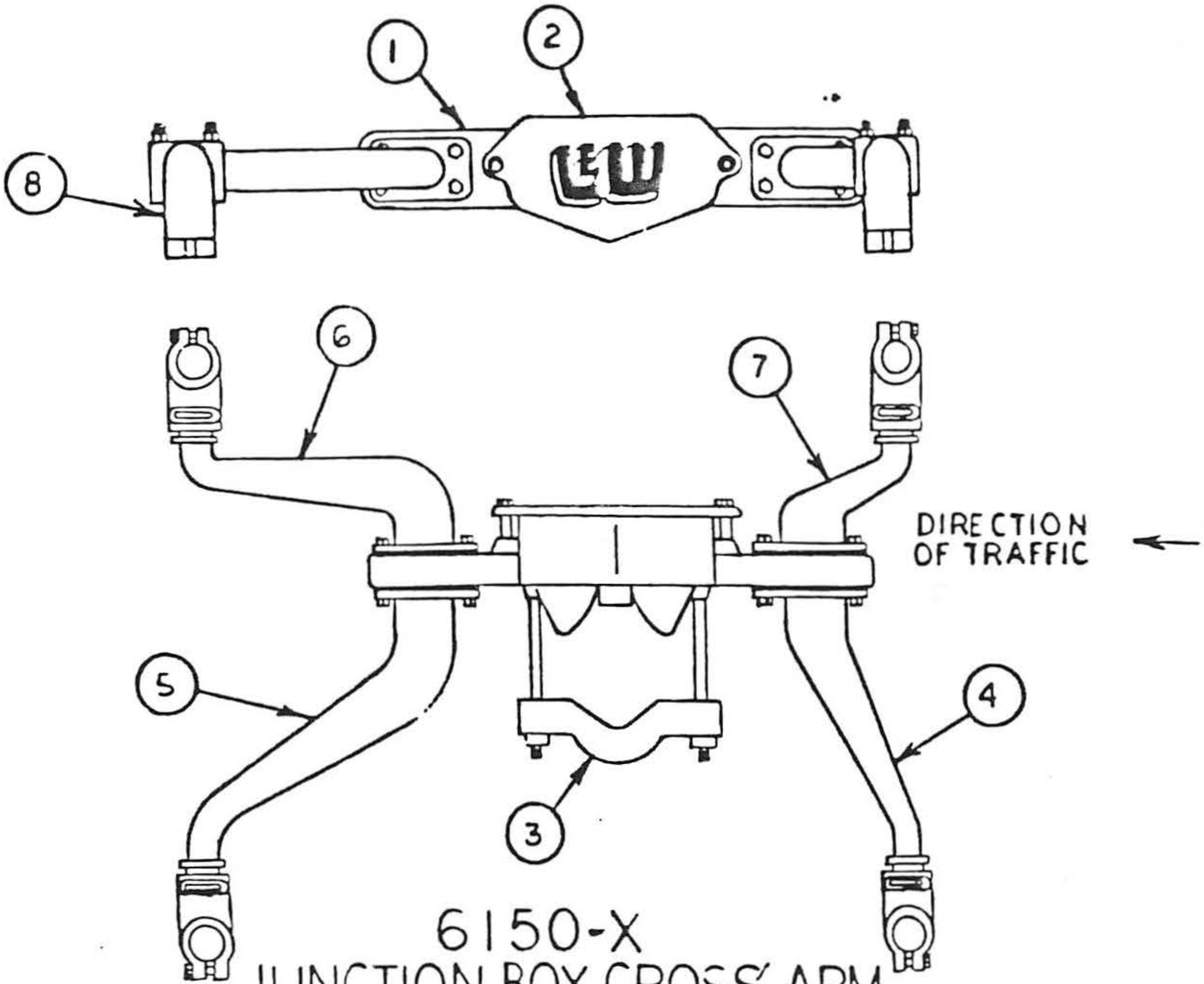


JCT. BOX

6100-X
JUNCTION BOX CROSS ARM
TWO WAY INDICATION
FOR 4" OR 5" PIPE

KEY	AMT.	PART Nº	DESCRIPTION
1	1	6001	JCT. BOX CROSS ARM
2	1	6002	COVER and 6002-A GASKET
3	1	6003	ADAPTOR CLAMP
4	4	6004	EXTENSION BRACKET 3½" and GASKET
5	4	6005	SUPPORT BRACKET
6	16	REF. A	HEX BOLT 3/8-16 × 1" LG.
7	30	REF. B	LOCKWASHER 3/8 SPLIT
8	2	REF. C	SQ. HD. BOLT (SPECIFY PIPE SIZE)
9	2	REF. D	HEX NUT 5/8-11 and LOCKWASHER
10	6	REF. E	HEX HD. CAPSCREW 3/8-16 × 2 LG.
11	8	REF. F	HEX NUT 3/8 - 16
12	4	REF. G	U-BOLT & STRAP
13	2	REF. H	TERMINAL BLOCK (A.A.R. 3-WAY)
14	2	REF. I	FLAT WASHER 3/8
15	4	REF. J	RD. HD. SLOTTED SCR. #10-32 × 1/2 LG.

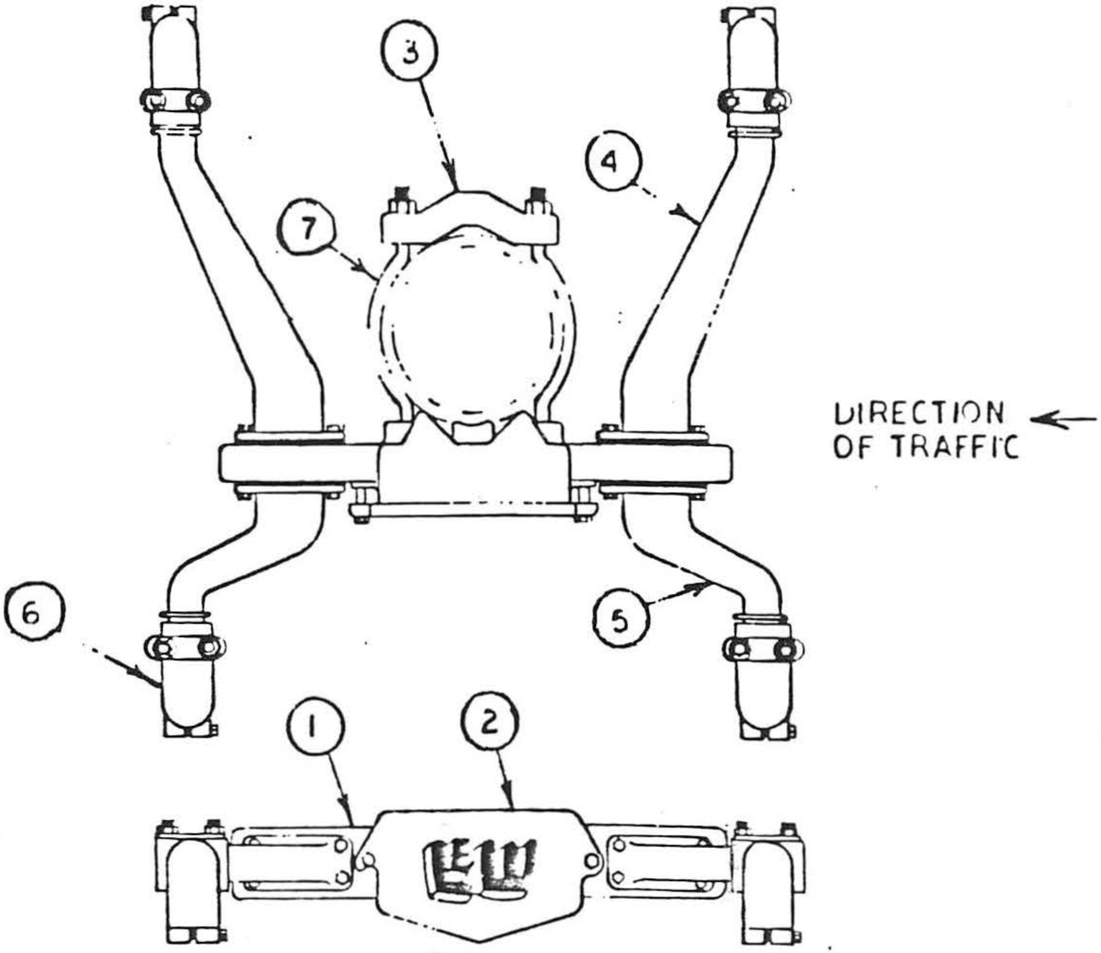
DWG. Nº 6100 L&W INDUSTRIES



6150-X
JUNCTION BOX CROSS ARM
TWO WAY INDICATION

KEY	QTY	PART Nº	DESCRIPTION
1	1	6001	JCT BOX CROSS ARM
2	1	6002	COVER & 6002-A GASKET
3	1	6003	ADAPTOR CLAMP
4	1	6004-1	EXTENSION BRACKET 4 7/8"
5	1	6004-2	EXTENSION BRACKET 12"
6	1	6004-3	EXTENSION BRACKET 12"
7	1	6004-4	EXTENSION BRACKET 4 7/8"
8	4	6005	SUPPORT BRACKET

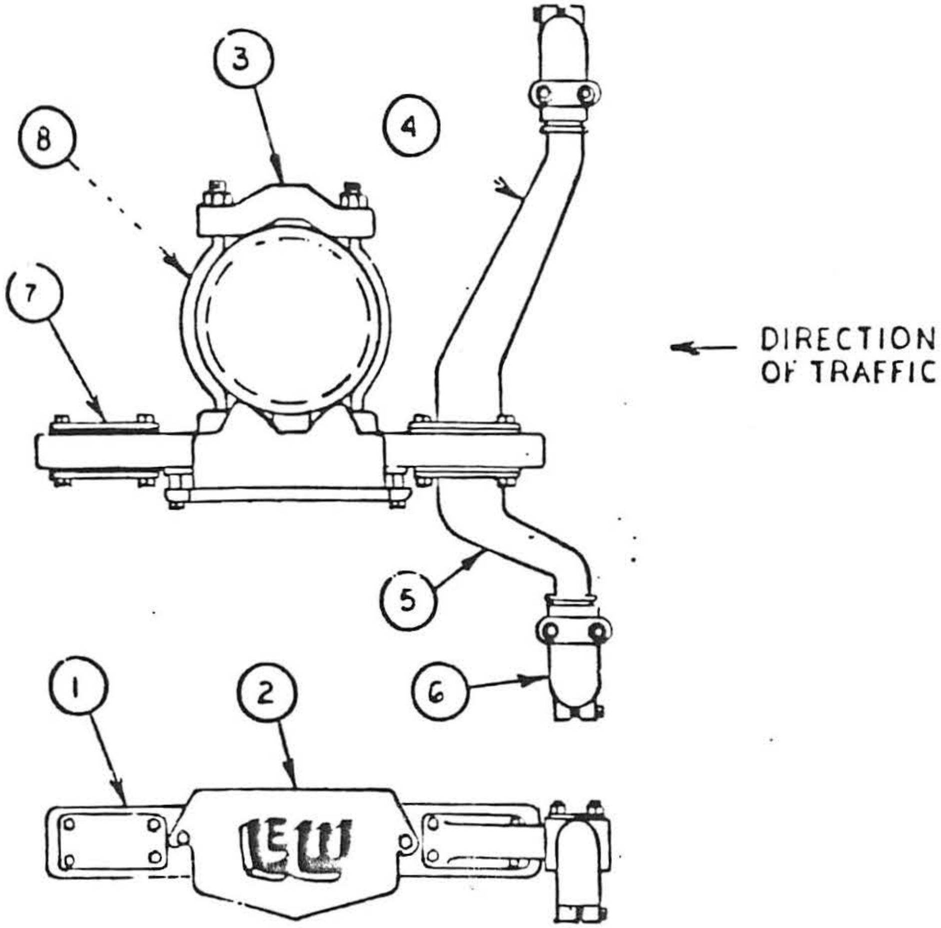
REMAINING PARTS SHOWN ON PAGES 11-4 & 11-5.



6160-X
JUNCTION BOX CROSS ARM
TWO WAY INDICATION

KEY	QTY	PART Nº	DESCRIPTION
1	1	6001	JCT BOX CROSS ARM
2	1	6002	COVER & 6002-A GASKET
3	1	6003	ADAPTOR CLAMP
4	2	6004-1	EXTENSION BRACKET 4 7/8
5	2	6004-4	EXTENSION BRACKET 4 7/8
6	4	6005	SUPPORT BRACKET
7	2		1/2 BOLT (SPECIFY MAST SIZE)

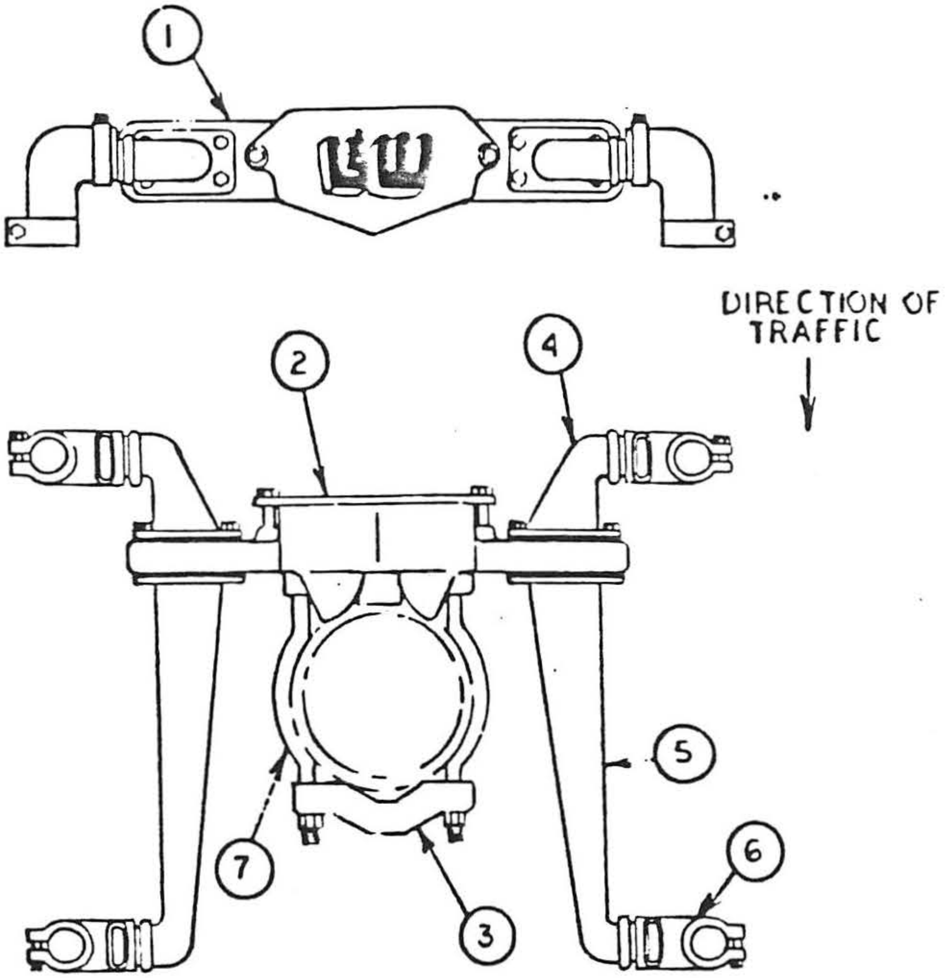
REMAINING PARTS SHOWN ON PAGES 11-4 & 11-5



6060-X
JUNCTION BOX CROSS ARM
ONE WAY INDICATION

KEY	QTY	PART Nº	DESCRIPTION
1	1	6001	JCT BOX CROSS ARM
2	1	6002	COVER & 6002-A GASKET
3	1	6003	ADAPTOR CLAMP
4	1	6004-1	EXTENSION BRACKET 16¼"
5	1	6004-4	EXTENSION BRACKET 8¼"
6	2	6005	SUPPORT BRACKET
7	2	6006	COVER PLATE & GASKET
8	2		½" BOLT (SPECIFY MAST SIZE)

[illegible]NG PARTS SHOWN ON PAGES 11-4 & 11-5

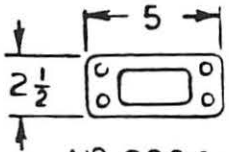


6170-X
JUNCTION BOX CROSS ARM
TWO WAY INDICATION

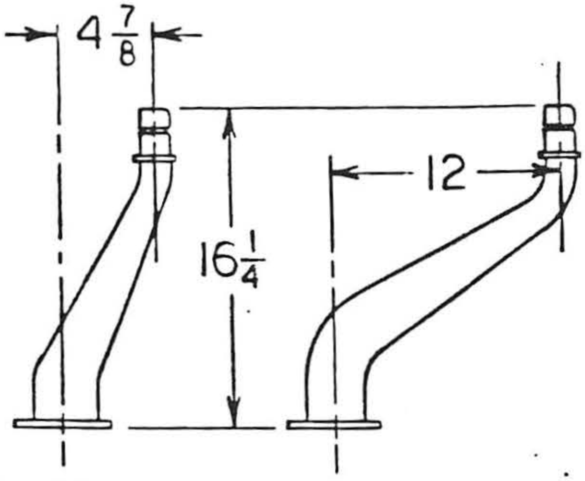
KEY	QTY	PART NO.	DESCRIPTION
1	1	6001	JUNCTION BOX CROSS ARM
2	1	6002	COVER & 6002 A GASKET
3	1	6003	ADAPTOR CLAMP
4	2	6004	EXTENSION BRACKET 3 1/2"
5	2	6004-5	EXTENSION BRACKET 16 1/2"
6	4	6005	SUPPORT BRACKET
7	2		1/2 BOLT (SPECIFY MAST SIZE)

REMAINING PARTS SHOWN ON PAGES 11-4 & 11-5

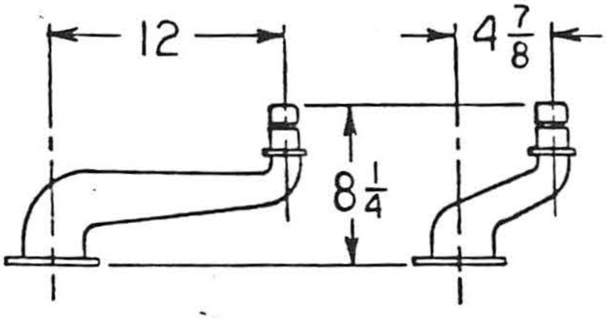
STANDARD EXTENSIONS FOR L&W SERIES 6000-X JUNCTION BOX CROSS ARMS



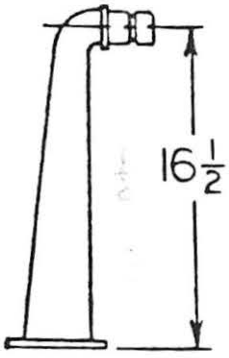
Nº 6004-A
GASKET



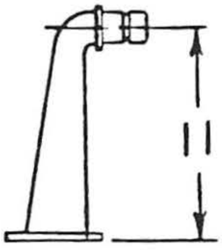
Nº 6004-1 Nº 6004-2



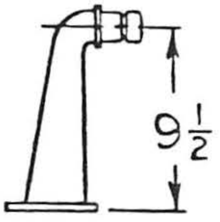
Nº 6004-3 Nº 6004-4



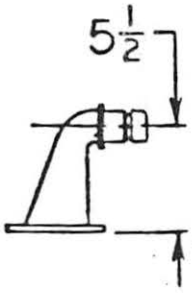
Nº 6004-5



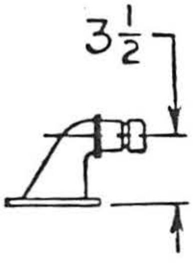
Nº 6004-6



Nº 6004-7



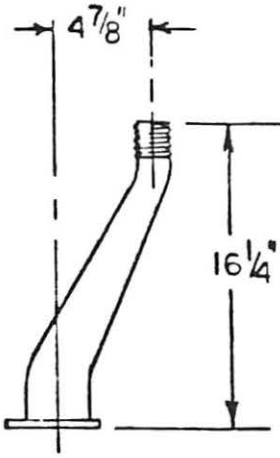
Nº 6004-8



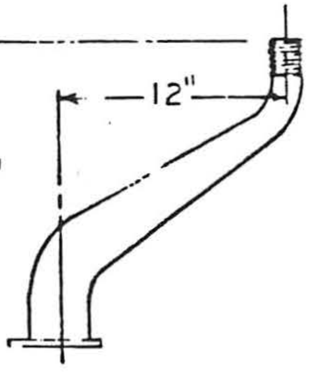
Nº 6004

ANY COMBINATION OF EXTENSIONS IS AVAILABLE SEPARATELY OR CAN BE SPECIFIED AS PART OF A COMPLETE CROSS ARM

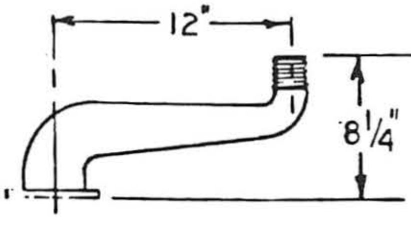
THREADED EXTENSIONS FOR
SERIES 6000-X
JUNCTION BOX CROSS ARMS



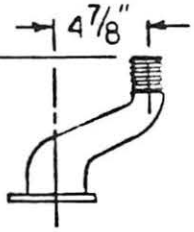
Nº 6004-1T



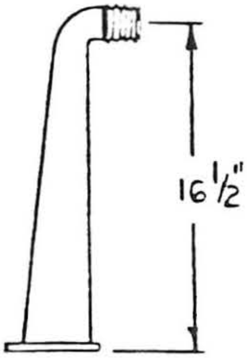
Nº 6004-2T



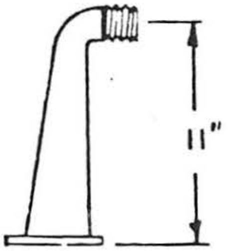
Nº 6004-3T



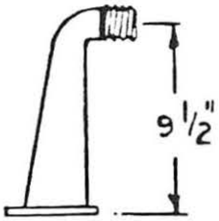
Nº 6004-4T



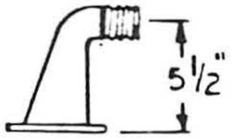
Nº 6004-5T



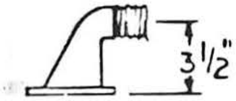
Nº 6004-6T



Nº 6004-7T



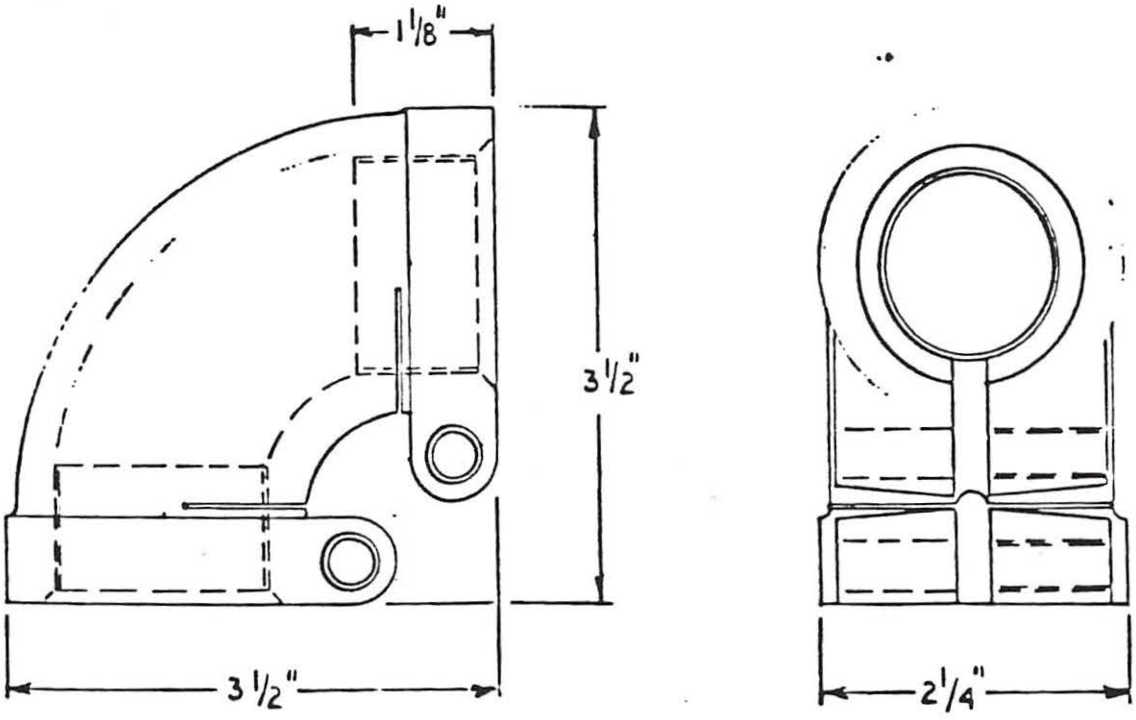
Nº 6004-8T



Nº 6004-T

ANY COMBINATION OF EXTENSIONS IS AVAILABLE
SEPARATELY OR CAN BE SPECIFIED AS PART OF A
COMPLETE CROSS ARM

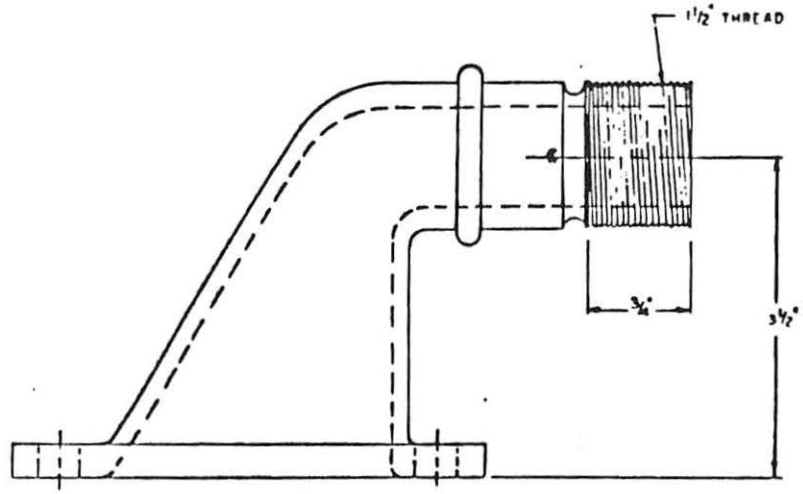
THESE PARTS ARE UNIVERSAL AND CAN BE USED WITH THREADED ARMS AS WELL AS ARMS WITH "U" BOLT ATTACHMENT


1 1/8"
3 1/2"
3 1/2"
2 1/4"

6009

90° THREADED ELBOW

NOTE: BOLTS INCLUDED

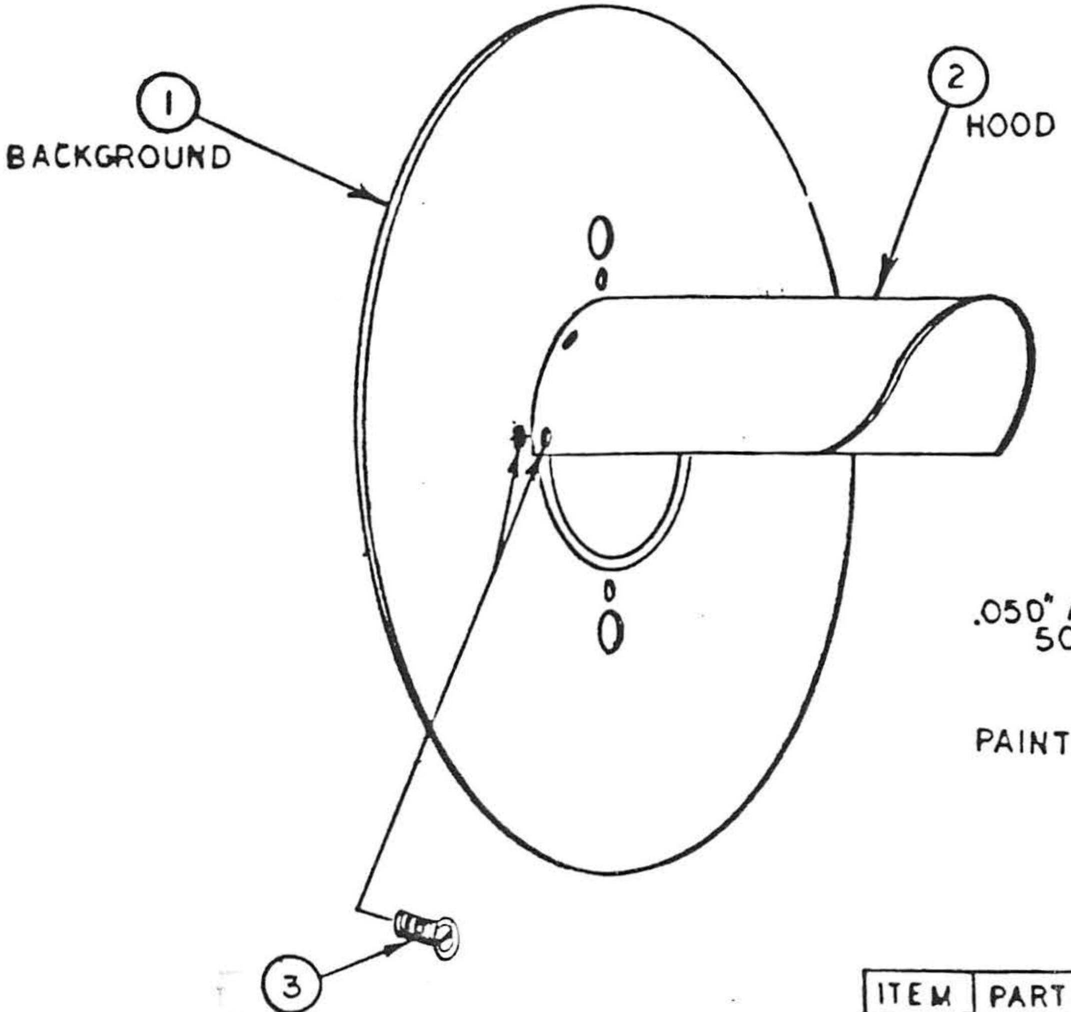

1½" THREAD
¾"
3½"
℄

L & W INDS., INC.

NONE
6-6-78
J C

THREADED EXTENSION

6004-T

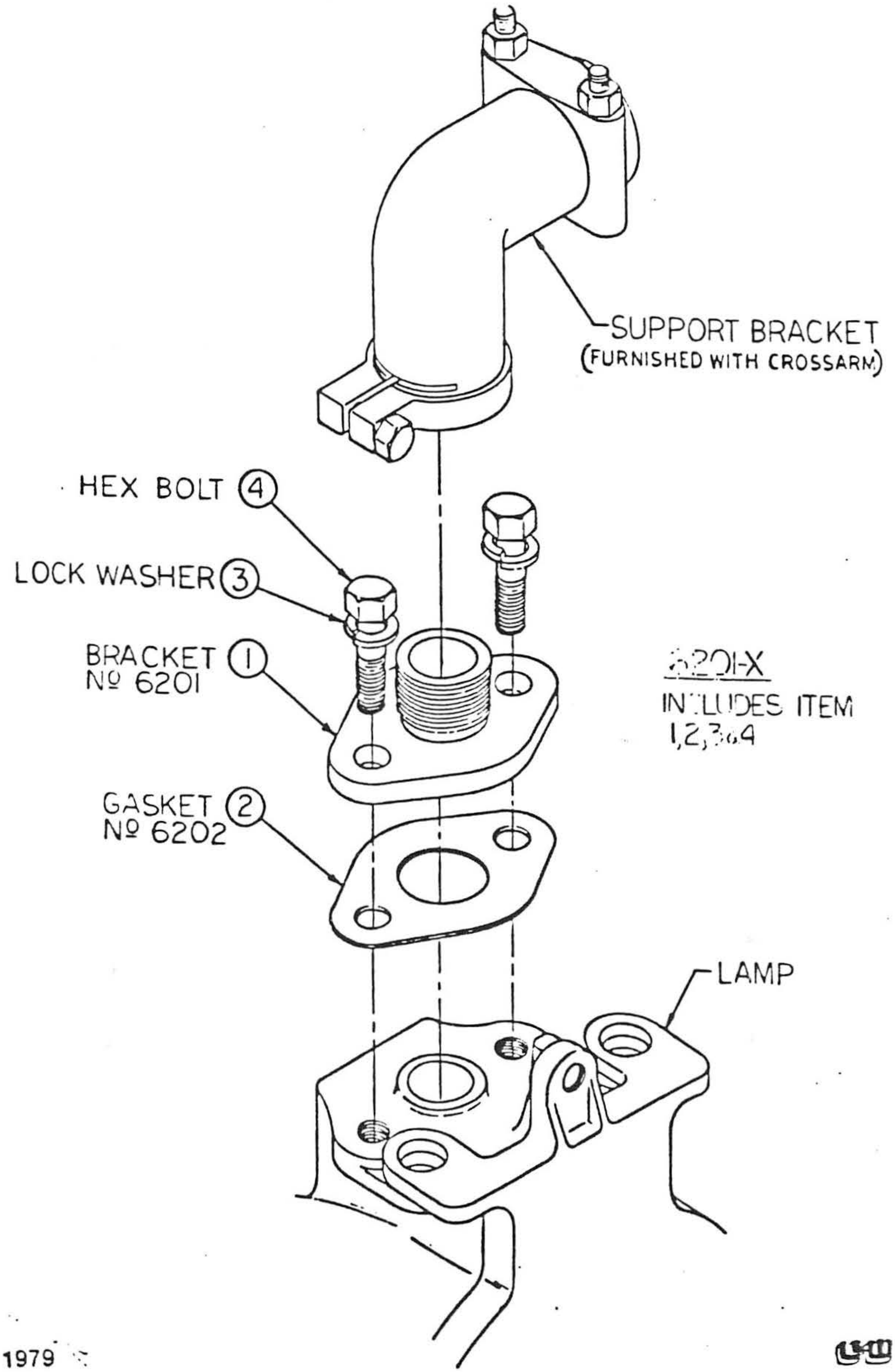

①
BACKGROUND
②
HOOD
③

.050" ALUMINUM
5005H34

PAINT FLAT BLACK

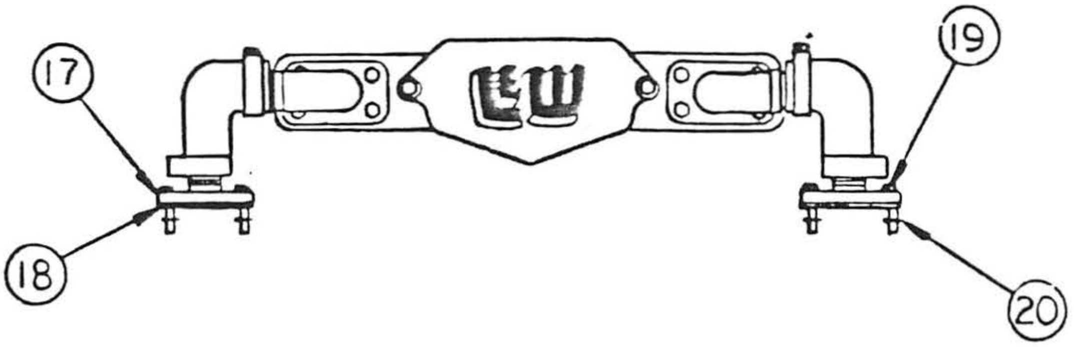
ITEM	PART Nº	CROSS REF
1	5025	FLX10
2	5026	FLX10
3	8-32 X 3/8"	WASHER SCREW

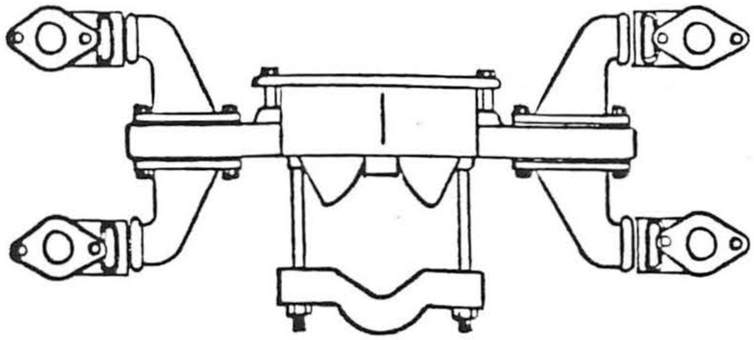
CONVERSION KIT FOR ADAPTING 950 TYPE LAMPS TO L&W CROSSARMS


SUPPORT BRACKET
(FURNISHED WITH CROSSARM)
HEX BOLT ④
LOCK WASHER ③
BRACKET ①
Nº 6201
GASKET ②
Nº 6202
LAMP

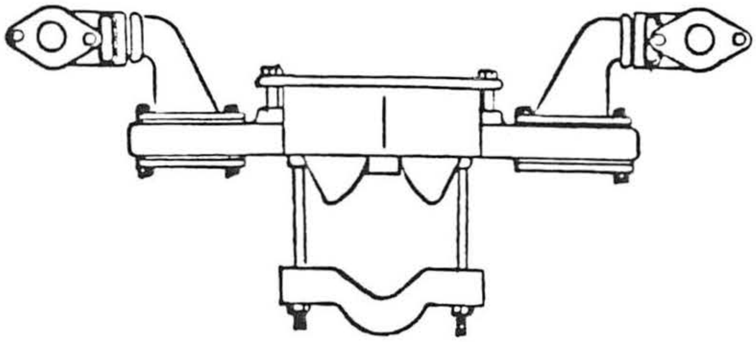
6201-X
INCLUDES ITEM
1,2,3&4

NOV. 1979





6300-X TWO-WAY INDICATION



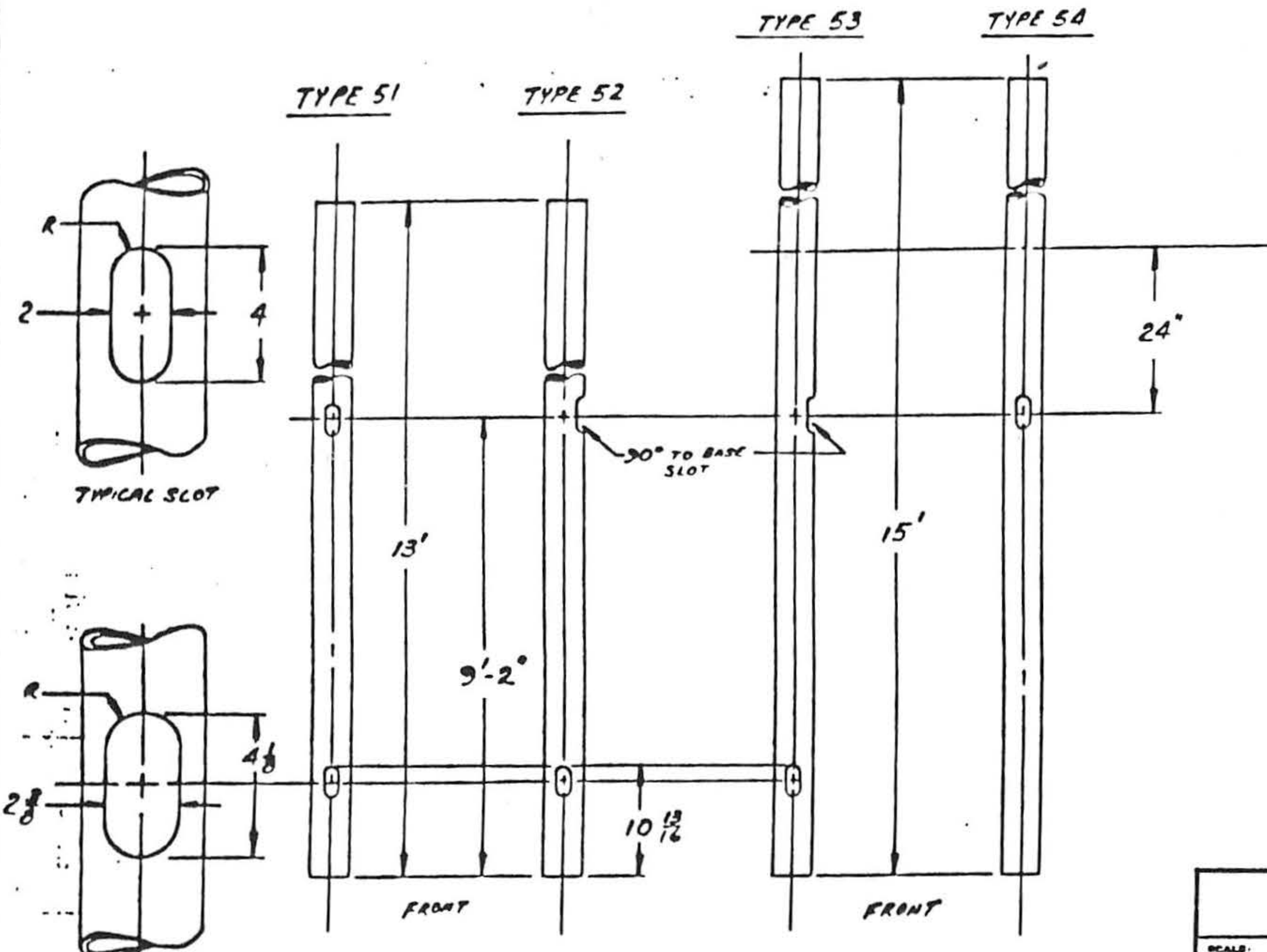
6200-X ONE WAY INDICATION

JUNCTION BOX CROSS ARMS

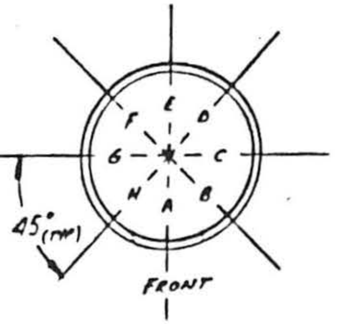
FOR 950 TYPE LAMP UNITS

KEY	QTY.	PART №	DESCRIPTION
17	1 PER LAMP	6201	MOUNTING BRACKET
18	1 PER LAMP	6202	GASKET
19	2 PER LAMP	REF. K	HEX BOLT
20	2 PER LAMP	REF. L	LOCK WASHER

REMAINING PARTS SHOWN ON PAGES 11-4 & 11-5


TYPE 51
TYPE 52
TYPE 53
TYPE 54
R
2
4
TYPICAL SLOT
R
$4\frac{1}{8}$
$2\frac{3}{8}$
BASE SLOT
13'
9'-2"
$10\frac{13}{16}$
90° TO BASE SLOT
15'
24"
FRONT
FRONT

STANDARD DRILLINGS FOR 5 INCH CROSSING GATE SIGNAL POLES


E
D
C
B
A
H
G
F
45°(TYP)
FRONT

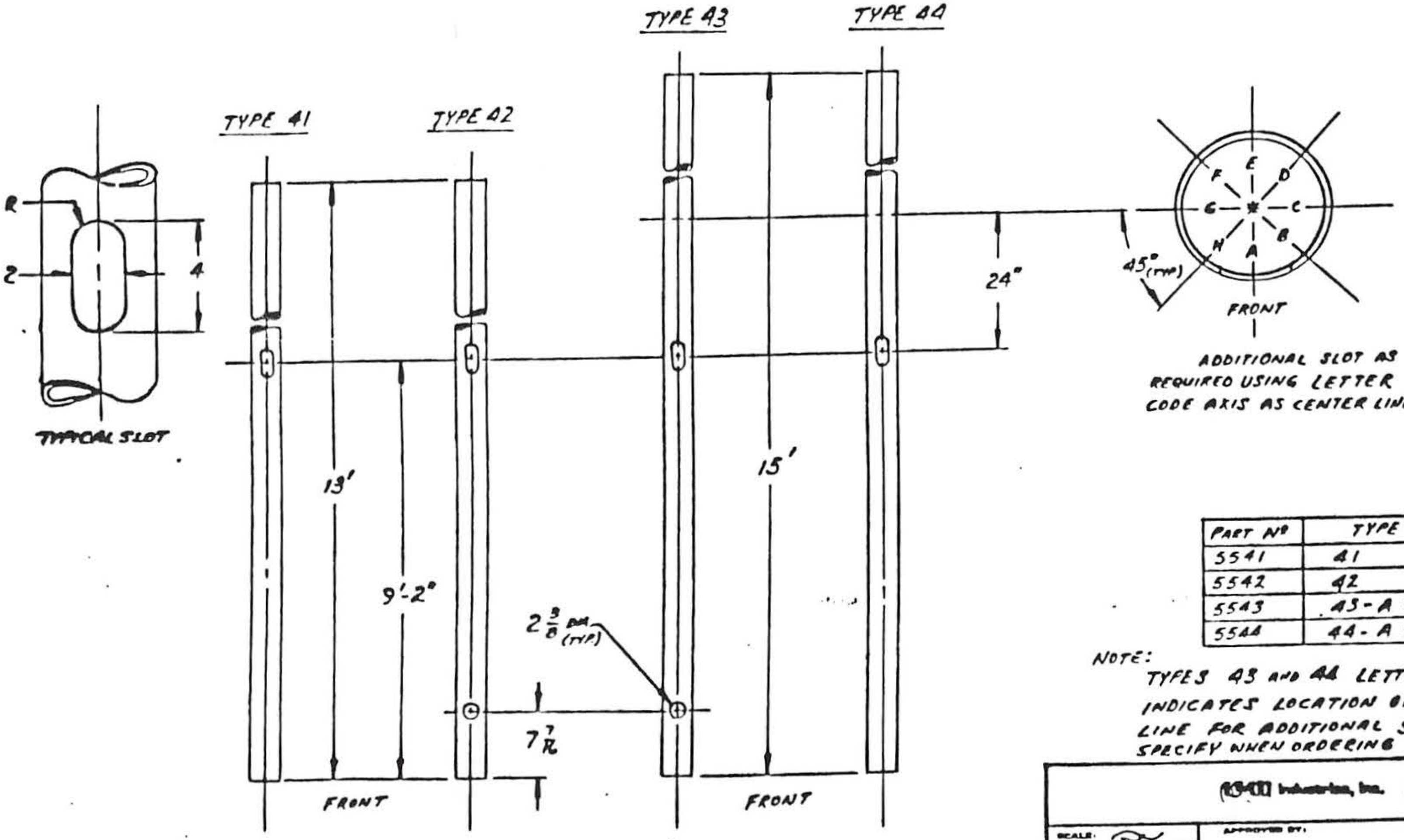
ADDITIONAL SLOT AS REQUIRED USING LETTER CODE AXIS AS CENTER LINE.

PART Nº	TYPE
5551	51
5552	52
5553	53-A THRU H (SEE NOTE)
5554	54-A THRU H (SEE NOTE)

NOTE:

TYPES 53 AND 54 LETTER SUFFIX INDICATES LOCATION OF CENTER LINE FOR ADDITIONAL SLOT. SPECIFY WHEN ORDERING.

[illegible] Industries, Inc.		
SCALE:	APPROVED BY:	DRAWN BY R.W. LUSSIN
DATE: 9-16-76		REVISED
5 INCH CROSSING GATE SIGNAL POLES		
		DRAWING NUMBER 5550


TYPICAL SLOT
R
2
4
TYPE 41
TYPE 42
TYPE 43
TYPE 44
13'
9'-2"
15'
24"
$2\frac{3}{8}$ DIA (TYP)
$7\frac{7}{16}$
FRONT
FRONT
E
D
C
B
A
H
G
F
45° (TYP)
FRONT

ADDITIONAL SLOT AS REQUIRED USING LETTER CODE AXIS AS CENTER LINE.

STANDARD DRILLINGS FOR 4 INCH FLASHING LIGHT SIGNAL POLES

PART Nº	TYPE
5541	41
5542	42
5543	43-A THRU H (SEE NOTE)
5544	44-A THRU H (SEE NOTE)

NOTE:
TYPES 43 AND 44 LETTER SUFFIX INDICATES LOCATION OF CENTER LINE FOR ADDITIONAL SLOT. SPECIFY WHEN ORDERING

CEW Industries, Inc.

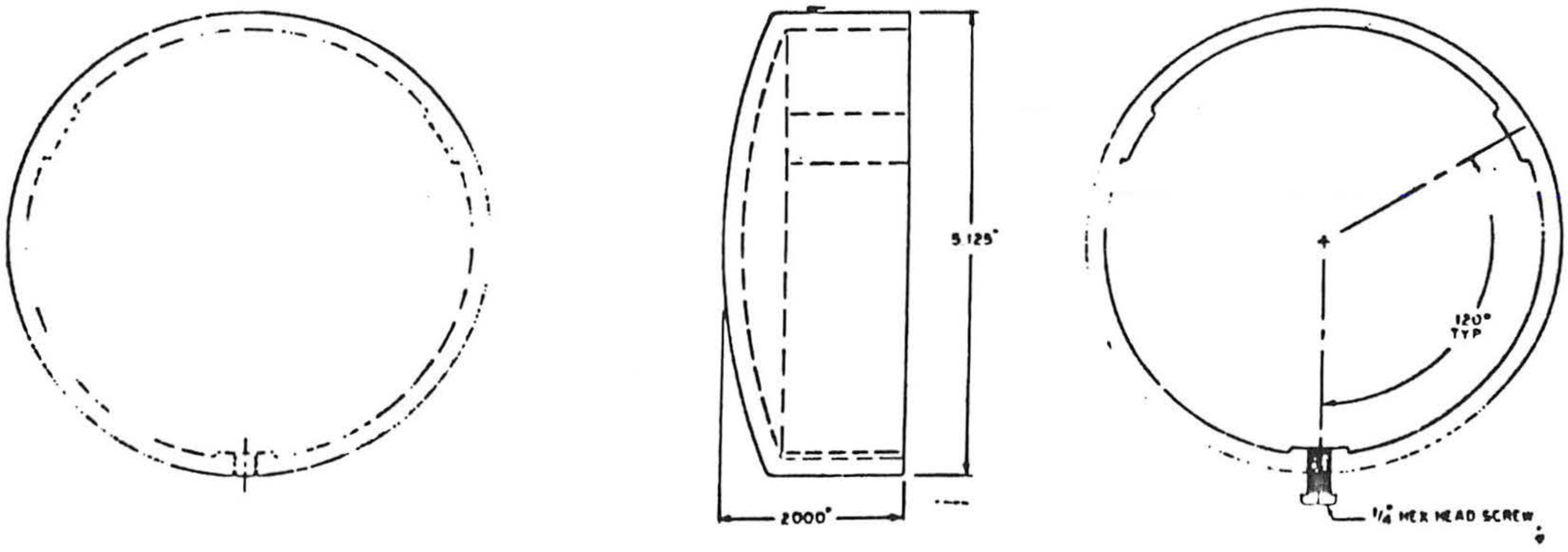
SCALE:
DATE: 3-15-76
APPROVED BY:
DRAWN BY R W Kuehn
REVISED

4 INCH
FLASHING LIGHT SIGNAL POLES

DRAWING NUMBER
5540

L&W industries, inc.

L&W industries, inc.


5.125"
2000"
120°
TYP
1/4" HEX HEAD SCREW

L&W industries, inc.

FULL

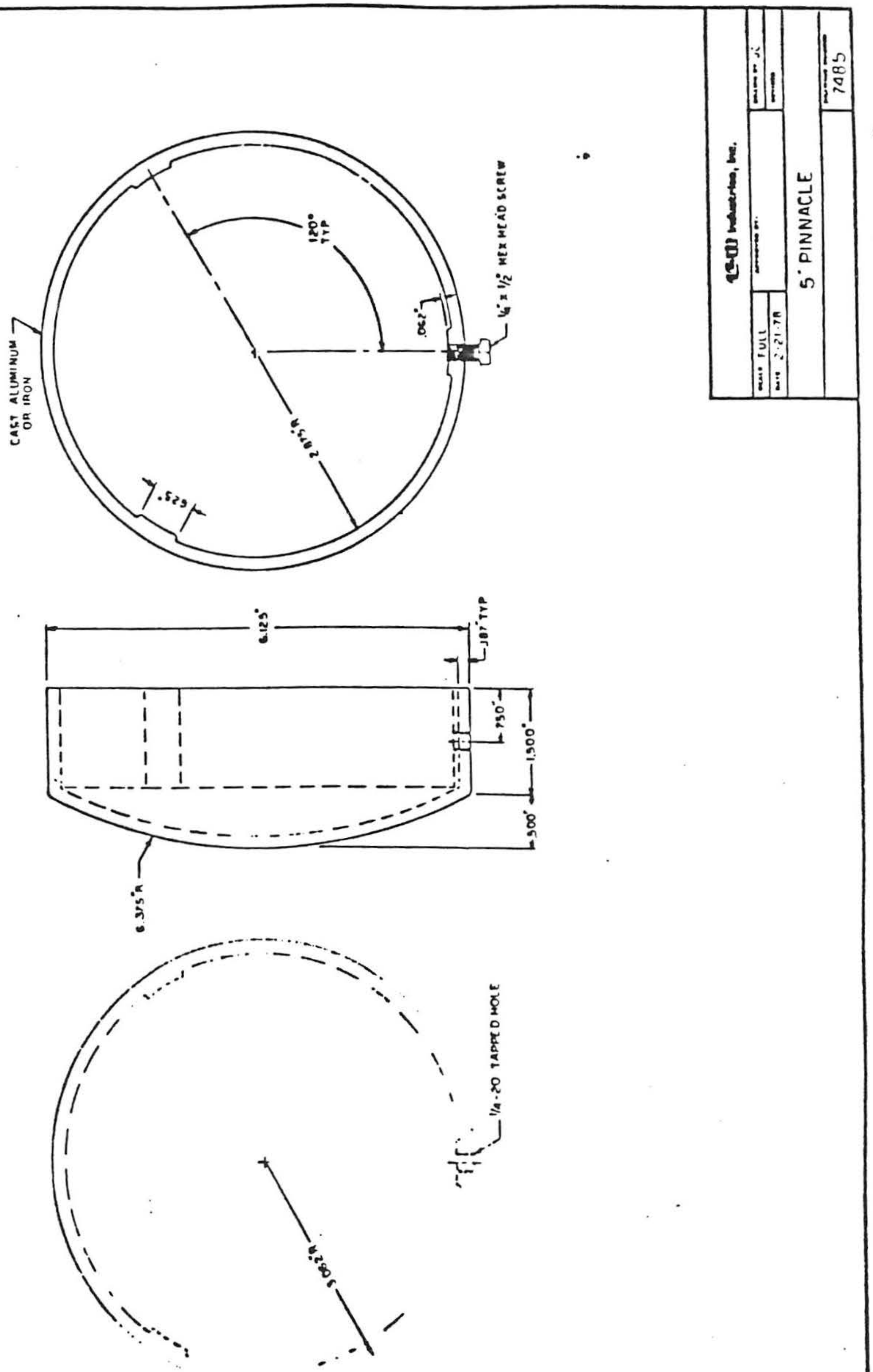
3-6-78

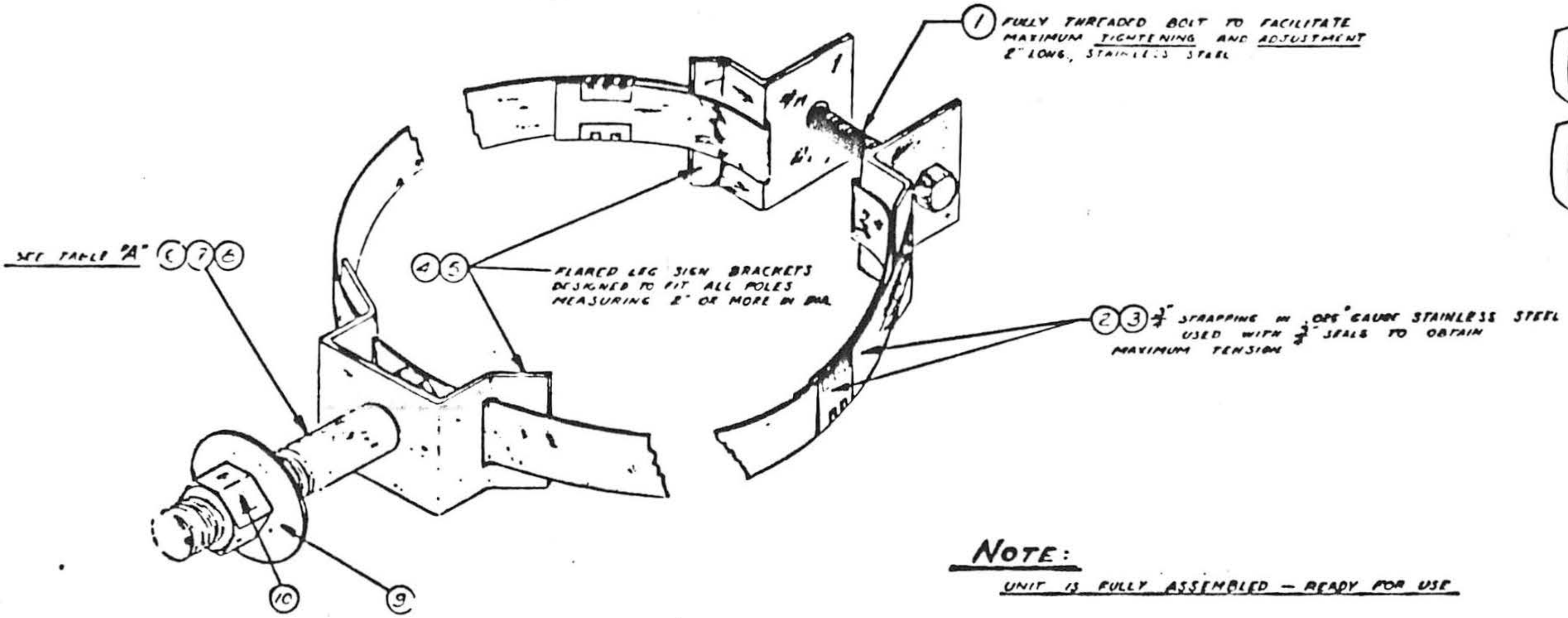
JC

4" PINNACLE

7500

MAY, 1977


L&W industries, Inc.
SCALE FULL
DATE 2-21-78
DRAWN BY JC
5' PINNACLE
7485
CAST ALUMINUM OR IRON
120° TYP
.062"
1/4" x 1/2 HEX HEAD SCREW
2.875"R
.625"
6.125"
.187" TYP
.750"
1.500"
.500"
6.375"R
1/4-20 TAPPED HOLE
3.062"R


①
FULLY THREADED BOLT TO FACILITATE MAXIMUM TIGHTENING AND ADJUSTMENT 2" LONG, STAINLESS STEEL
④⑤
FLARED LEG SIGN BRACKETS DESIGNED TO FIT ALL POLES MEASURING 2" OR MORE IN DIA.
②③
3/4" STRAPPING IN .025" GAUGE STAINLESS STEEL USED WITH 3/4" SEALS TO OBTAIN MAXIMUM TENSION
SEE TABLE "A" ⑥⑦⑧
⑩
⑨

NOTE:

UNIT IS FULLY ASSEMBLED — READY FOR USE

TABLE "A"

#	SIGN MOUNTING BOLT LENGTHS AVA	USED WITH
6	5/8 - 12 - 3" LONG, CAD PLATED 1 1/2" THREADED	RAILROAD CROSSING SIGN
7	5/8 - 12 - 2" LONG, CAD PLATED, 1 1/2" THREADED	MULTIPLE TRACK SIGN
8	5/8 - 12 - 1 1/2" LONG CAD PLATED FULLY THREADED	MULTIPLE TRACK SIGN

LTR	STANDARD SIZE MOUNTING UNITS AVAILABLE
A	TO FIT 4" DIA. POLE
B	TO FIT 5" DIA POLE
C	TO FIT [illegible] DIA POLE
D	TO FIT ALL OTHER DIA POLE. PLEASE SPECIFY DIA

FOR EXAMPLE:

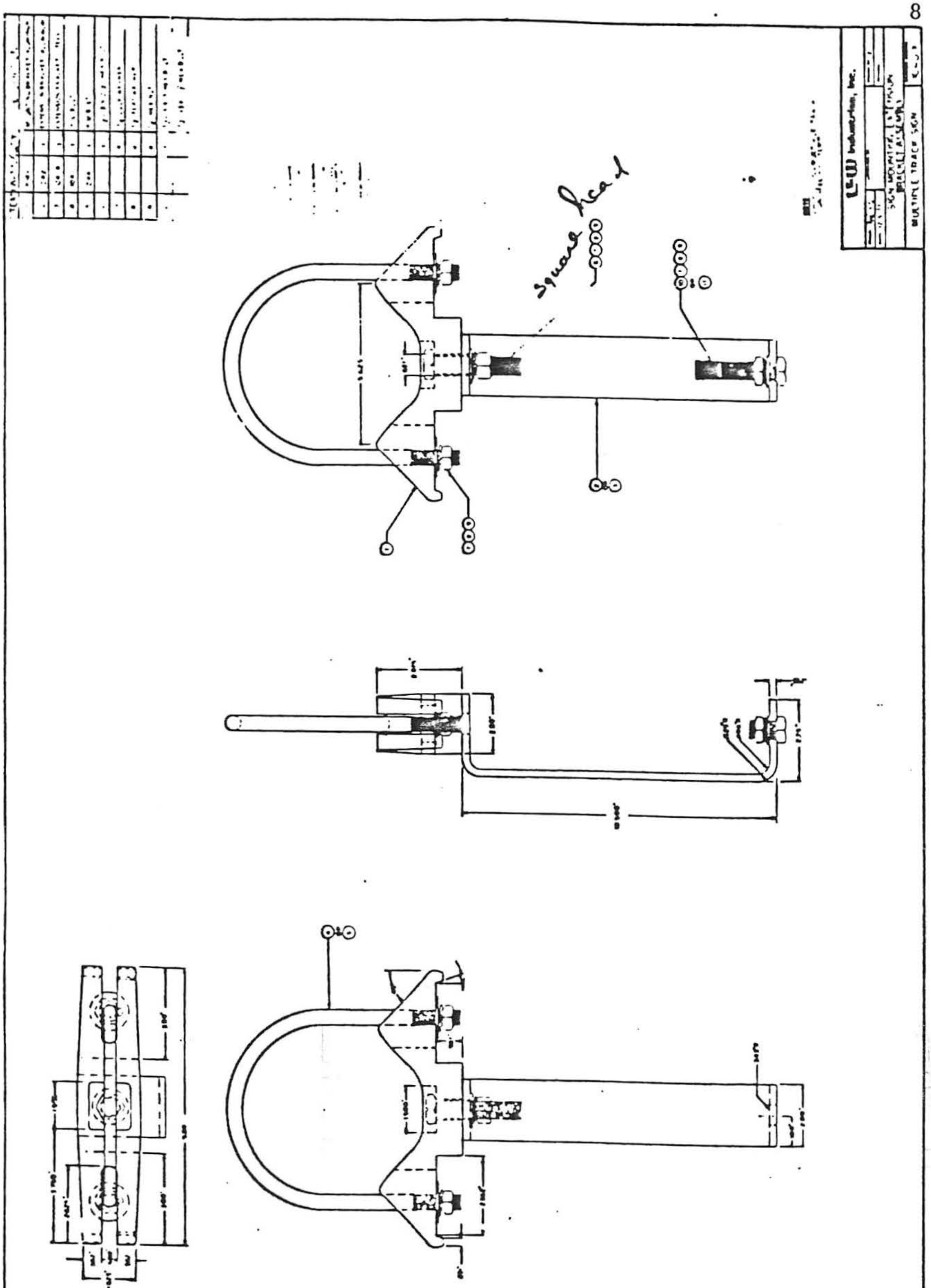
TO ORDER A SIGN MOUNTING UNIT FOR A 6" DIA POLE TO BE USED TO HOLD A MULTIPLE TRACK SIGN, W/ A 2" LG BOLT. NOTE THAT IT IS A NON-STANDARD DIA. - SIZE-D AND THE BOLT NEEDED IS A #7 CHECK CHART AT RIGHT FOR ORDER NO. FOR A "D-7" SIGN MOUNTING ASSEMBLY → #0120

ORDER BY PART NO

CODE	PART NO.
A-6	0110
A-7	0111
A-8	0112
B-6	0113
B-7	0114
B-8	0115
C-6	0116
C-7	0117
C-8	0118
D-6	0119
D-7	0120
D-8	0121

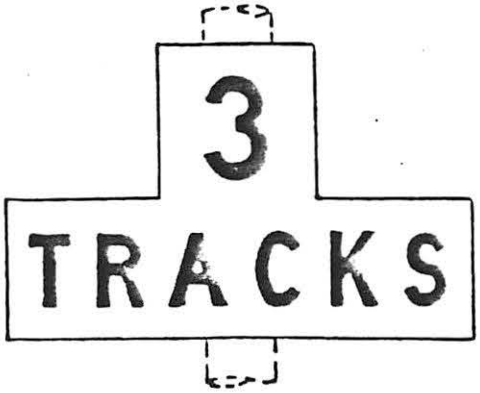
No.	DESCRIPTION	QTY	PART No.
1	5/16 - 18 - 2" LG S.S. BOLT & NUT - S.S.	1	0102
2	3/4" STRAPPING x .025" GA - S.S. x [illegible]	1	0103
3	3/4" SEALS	2	0104
4	LEG SIGN BRACKET w/ 11/32 D HOLE	2	0105
5	LEG SIGN BRACKET w/ 11/16 D HOLE	1	0106
6	SEE TABLE "A" HEX HEAD BOLT	1	0107
7	SEE TABLE "A" HEX. HEAD BOLT	1	0108
8	SEE TABLE "A" HEX HEAD BOLT	1	0109
9	1 3/4" O.D. WASHER w/ 11/16 DIA	1	0122
10	5/8 - 12 HEX HD. NUT - CAD PLATED	1	0123

L & W INDUSTRIES, INC.		
NONE 8·3·73	JRLong	Ocee K.
SIGN MOUNTING ASSEMBLY		
ON ORDERS #0119 - #0120 #0121 SPECIFY DIA.		LW-1000-1


Square head
L&W Industries, Inc.
SIGN MOUNTING, EXTENSION BRACKET ASSEMBLY
MULTIPLE TRACK SIGN

NOV. 1979

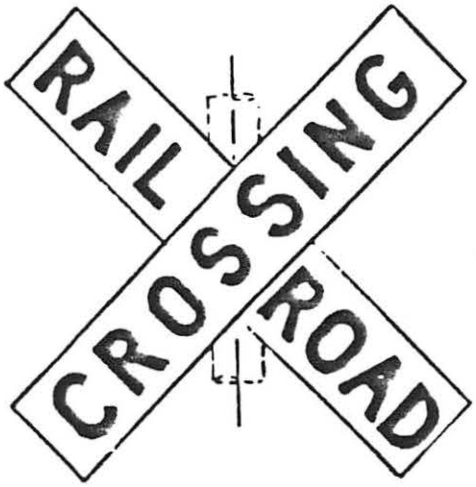
L&W industries, inc.



1050-X, 1051

1050-X = MULTIPLE TRACK SIGN COMPLETE
WITH MOUNTING HARDWARE, SPECIFY
POLE SIZE
NOTE; SPECIFY NUMBER OF TRACK

1051 = MULTIPLE TRACK SIGN ONLY
NOTE: SPECIFY NUMBER OF TRACKS



1060-X,1065-X,1061,1066

1060-X: RAILROAD SIGN COMPLETE WITH MOUNTING HARDWARE, SPECIFY POLE SIZE

1061 = RAILROAD CROSSING SIGN ONLY

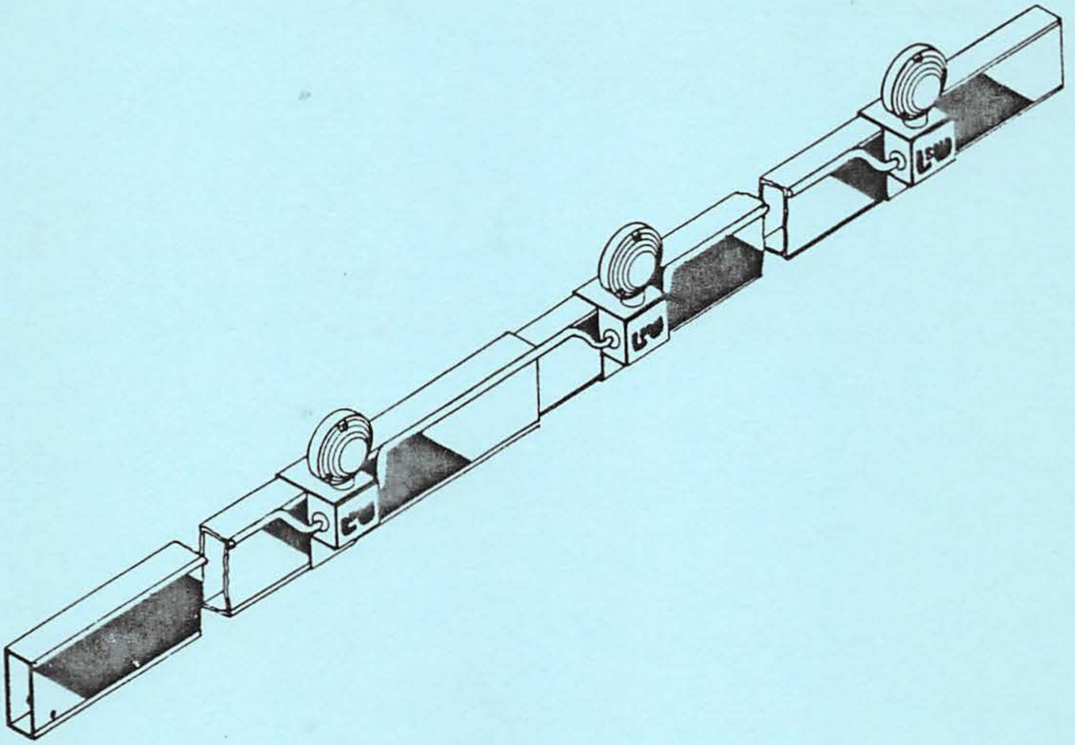
1065-X: RAILROAD CROSSING SIGN COMPLETE WITH MOUNTING HARDWARE AND 2"X 19" REFLECTORIZED STRIP ON BACK OF EACH SIDE

1066 = RAILROAD CROSSING SIGN ONLY WITH 2"X 19" REFLECTORIZED STRIP ON BACK OF EACH SIDE

NOTE: SPECIFY HIGH INTENSITY SCOTCHLITE IF REQUIRED

AG1

ALUMINUM/FIBERGLASS GATEARM



JUNE 1985

L & W INDS., INC.
3149 E. CHESTNUT EXPWAY.
SPRINGFIELD, MO 65802

L&W INDS., INC.

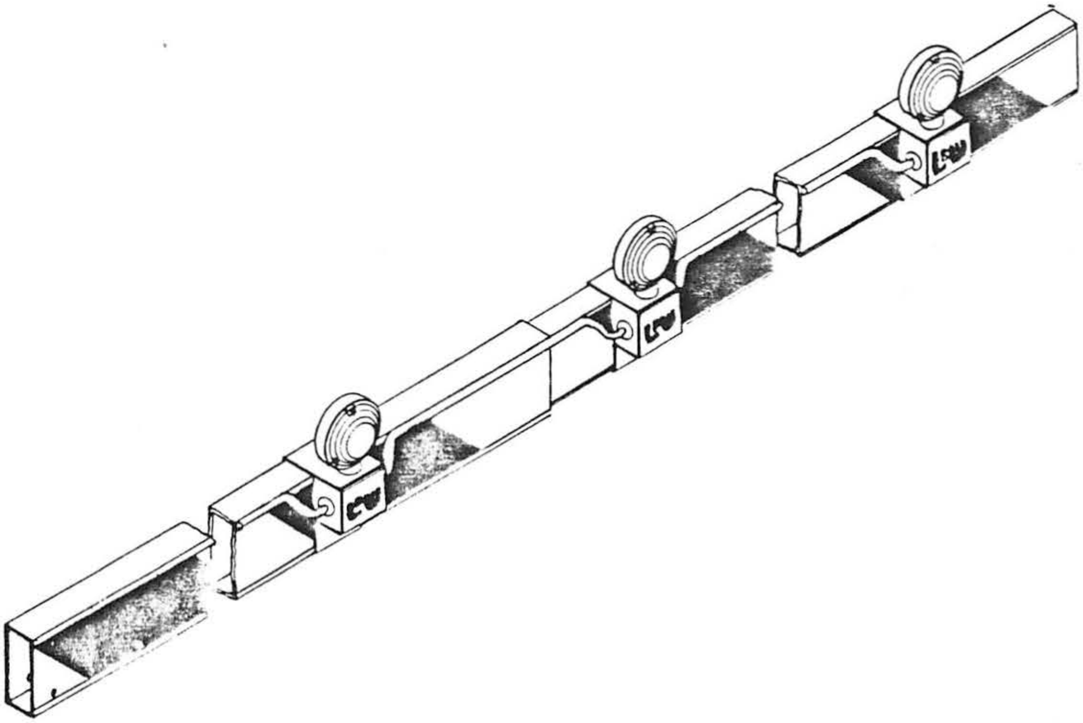
FOR ADDITIONAL INFORMATION CONTACT:

L & W INDS., INC.
3149 E. CHESTNUT EXPWAY.
SPRINGFIELD, MO 65802
(417) 864-5411

L&W INDUSTRIES, INC.

AG1

ALUMINUM/FIBERGLASS GATEARM



AG1 is constructed of one section of extruded aluminum and one section of extruded fiberglass. The fiberglass section is predrilled in increments of 16" and telescopes into the aluminum base section. The gate arm can be adjusted to any desired length from 8'-16' or 16'-32'.

AG1 is easy to assemble. The only tools needed are small hand tools, such as, a pocket knife, terminal wrench, & a small crescent wrench. All the holes required for mounting the gate, running the wire, & adjusting the length are predrilled in the factory.

AG1 is truly a gate designed for one man assembly & installation.

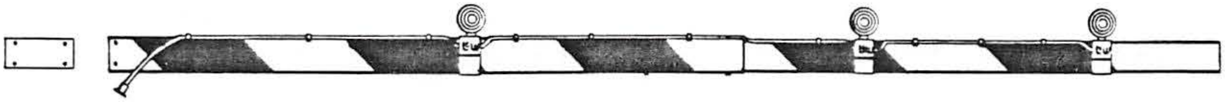
L&W industries, inc.
3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

L & W INDUSTRIES, INC.

L & W AG1 ALUMINUM/FIBERGLASS GATEARM
8FT TO 16FT ADJUSTABLE

GATE CONSISTS OF:

- -8ft Aluminum Base Section
- -8ft Fiberglass Second Section
- -Engineering Grade or High Intensity Reflex Reflective Stripes
- -3ea - 4 inch or 7 inch dia. gatelamps
- -4-pin plug & receptacle assembly & cord
- -Wire ties
- -Aluminum Mounting Sleeve
- -2ea - Toggle Bolts
- -All required mounting hardware



TRACK SIDE VIEW

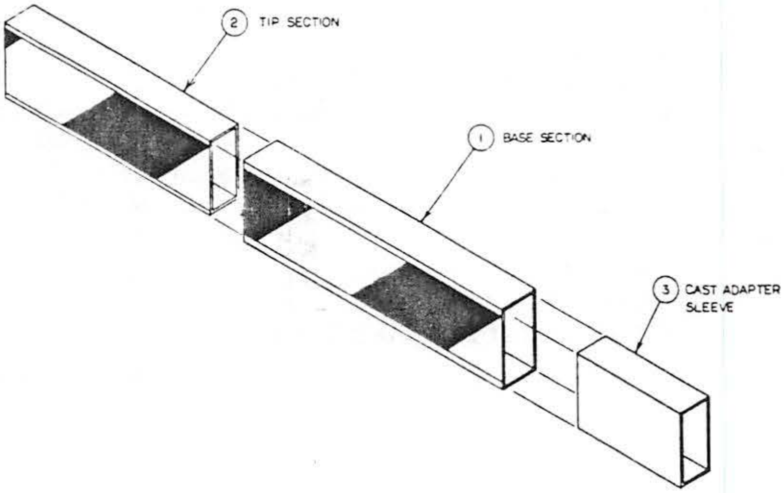
TO ORDER: SPECIFY DESCRIPTION & ORDERING REFERENCE

DESCRIPTION	ORDERING REFERENCE
8ft to 16 ft AG1 Aluminum/Fiberglass Gatearm Reflex Reflecting Stripes	L&W Part No. 1568-XRS Specify 4 or 7 inch dia. gatelamps
8ft to 16ft AG1 Aluminum/Fiberglass Gatearm High Intensity Stripes	L&W Part No. 1568-XHS Specify 4 or 7 inch dia. gatelamps

L&W industries, inc.
3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

L & W INDUSTRIES, INC.

REPLACEMENT BASES AND SECTIONS FOR L&W AG1 (8ft to 16ft) ALUMINUM/FIBERGLASS GATEARMS



AGI REPLACEMENT BASES & SECTIONS HAVE REFLEX REFLECTING STRIPES AND ARE PREDRILLED FOR IMMEDIATE INSTALLATION

TO ORDER SPECIFY DESCRIPTION & ORDERING REFERENCE (FOR 8 TO 16FT AG1)

ITEM	DESCRIPTION	ORDERING REFERENCE
1	Base Section-8ft Aluminum With Reflex Reflecting Stripes	L&W Part No. 1561-1RS
	Base Section-8ft Aluminum With High Intensity Stripes	L&W Part No. 1561-1HS
2	Tip Section-8ft Fiberglass With Reflex Reflecting Stripes	L&W Part No. 1562-1RS
	Tip Section-8ft Fiberglass With High Intensity Stripes	L&W Part No. 1562-1HS
3	Cast Adapter Sleeve (This sleeve is functional for both 8'-16' & 16'-32' AG1 gatearm)	L&W Part No. 1564

industries, inc.
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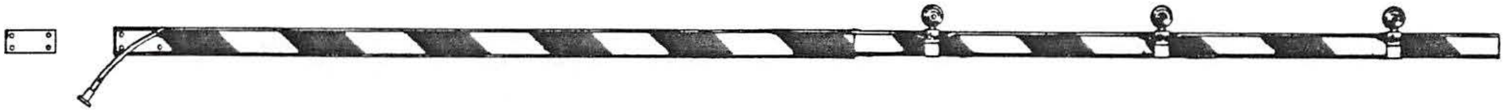
Springfield, MO 65802
417/864-5411

L & W INDUSTRIES, INC.

L & W AG1 ALUMINUM/FIBERGLASS GATEARM
16FT TO 32FT ADJUSTABLE

GATE CONSISTS OF:

- 16ft Aluminum Base Section
- 16ft Fiberglass Second Section
- Engineering Grade or High Intensity Reflex Reflective Stripes
- 3ea - 4 inch or 7 inch dia. gatelamps
- 4-pin plug & receptacle assembly & cord
- Wire ties
- Aluminum Mounting Sleeve
- 2ea - Toggle Bolts
- All required mounting hardware



TRACK SIDE VIEW

TO ORDER: SPECIFY DESCRIPTION & ORDERING REFERENCE

DESCRIPTION	ORDERING REFERENCE
16ft to 32 ft AG1 Aluminum/Fiberglass Gatearm Reflex Reflecting Stripes	L&W Part No. 1566-XRS Specify 4 or 7 inch dia. gatelamps
16ft to 32ft AG1 Aluminum/Fiberglass Gatearm High Intensity Stripes	L&W Part No. 1566-XHS Specify 4 or 7 inch dia. gatelamps

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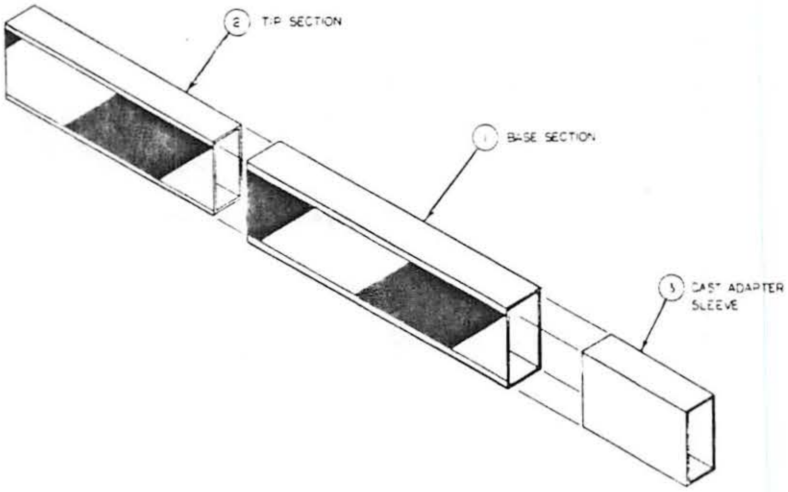
L & W INDUSTRIES, INC.

REPLACEMENT BASES AND SECTION
FOR L&W AG1 (16ft to 32ft) ALUMINUM/FIBERGLASS GATEARMS



AGI REPLACEMENT BASES & SECTIONS HAVE REFLEX REFLECTING STRIPES AND ARE PREDRILLED FOR IMMEDIATE INSTALLATION

TO ORDER SPECIFY DESCRIPTION & ORDERING REFERENCE (FOR 16 TO 32FT AG1)

ITEM	DESCRIPTION	ORDERING REFERENCE
1	Base Section-16ft Aluminum With Reflex Reflecting Stripes	L&W Part No. 1561-RS
	Base Section-16ft Aluminum With High Intensity Stripes	L&W Part No. 1561-HS
2	Tip Section-16ft Fiberglass With Reflex Reflecting Stripes	L&W Part No. 1562-RS
	Tip Section-16ft Fiberglass With High Intensity Stripes	L&W Part No. 1562-HS
3	Cast Adapter Sleeve (This sleeve is functional for both 8'-16' & 16'-32' AG1 gatearm)	L&W Part No. 1564

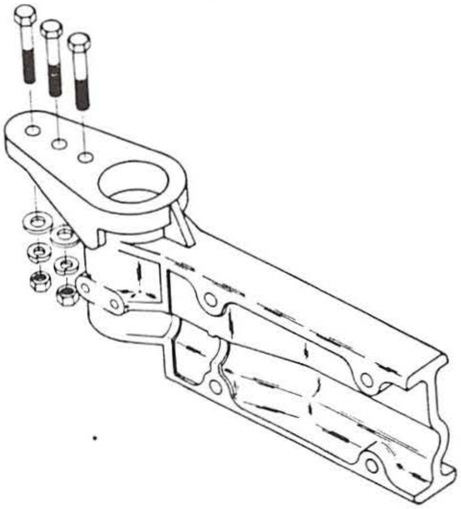
L&W industries, inc.
3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

INFORMATION FOR MOUNTING L&W AG1, FG1, COMBO & FIBERGLASS GATES ONTO SAFETRAN BREAKAWAYS

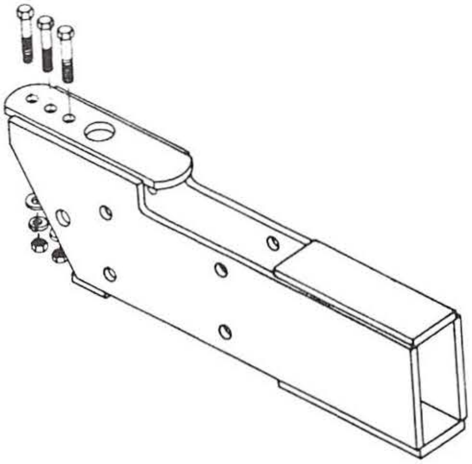
SAFETRAN BREAKAWAYS

L&W AG1, FG1, COMBO, AND FIBERGLASS GATEARMS WILL MOUNT ON THE SAFETRAN CAST AND FABRICATED BREAKAWAYS SHOWN WITHOUT ANY ADDITIONAL ADAPTORS.

CAST BREAKAWAY



FABRICATED BREAKAWAY



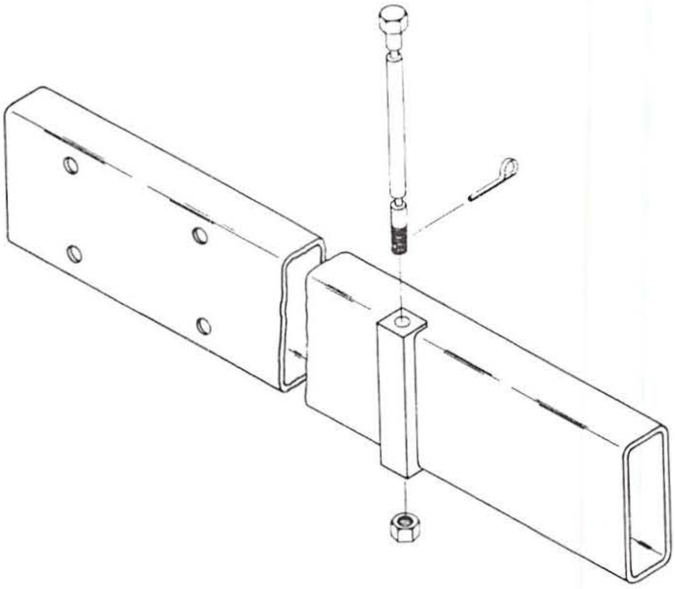
L&W industries, inc.
3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

L & W INDUSTRIES, INC.

INFORMATION FOR MOUNTING L&W AG1,FG1, COMBO & FIBERGLASS GATES ONTO WESTERN CULLEN AND US&S BREAKAWAYS

WESTERN CULLEN & US&S BREAKAWAYS

L&W AG1, FG1, COMBO AND FIBERGLASS GATES WILL MOUNT ON THE WESTERN AND US&S BREAKAWAYS WITH THE USE OF THE L&W BREAKAWAY SLEEVE.



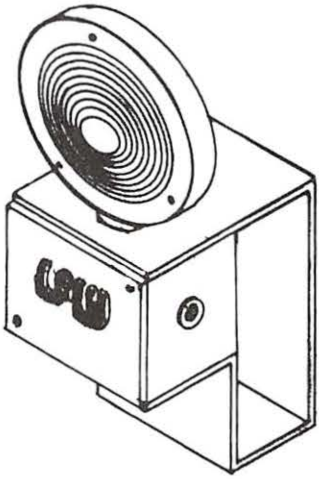
The L&W breakaway sleeve can be used on all Western Cullen-Hayes breakaways except for the earlier bi-directional models. See catalog section 9-E page 7 for ordering information.

If you wish to change out the older or new model W-C-H breakaways to the L&W cast breakaway, please see catalog section 9-E page 6 for ordering information on conversion adapter.

L & W INDUSTRIES, INC.

L&W AG1 4 INCH GATELAMP COMPLETE

- All polycarbonate plastic lamp
- Aluminum weatherproof box
- Grommet cable entrances
- Durable red lexan ring



ORDERING INFORMATION

TO ORDER: Specify description and ordering reference.

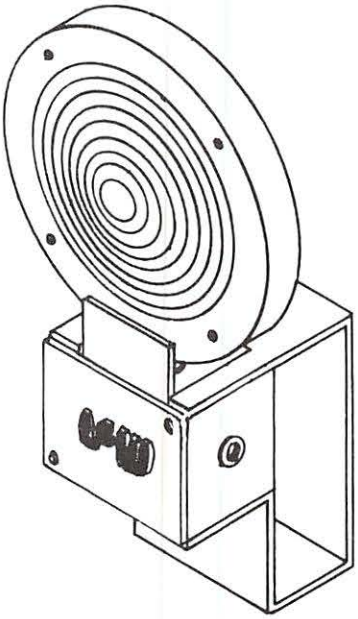
DESCRIPTION	ORDERING REFERENCE
Complete 4 inch AG1 gatelamp	L&W part No. 1030-X Std. package: 3 per box

9-A-9

L&W INDUSTRIES, INC.

L&W AG1 7 INCH GATELAMP COMPLETE

-All polycarbonate plastic lamp
-Aluminum weatherproof box
 with anti-vandal ears
-Grommet cable entrances
-Durable red lexan ring



ORDERING INFORMATION

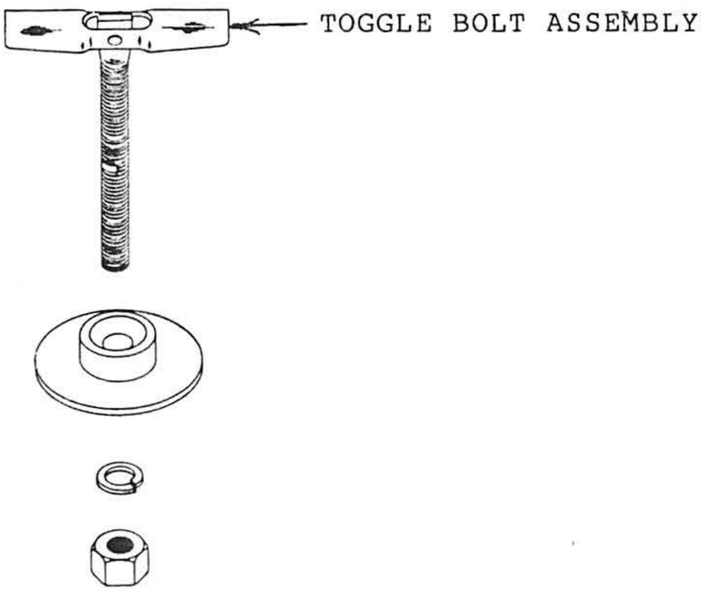
TO ORDER: Specify description and ordering references.

DESCRIPTION	ORDERING REFERENCE
Complete 7 inch AG1 gatelamp	L&W part No. 1031-X Std. Package: 3ea per box

L&W industries, inc.
3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

L & W INDUSTRIES, INC.

REPLACEMENT PARTS & MOUNTING HARDWARE FOR AG-1 ALUMINUM/FIBERGLASS GATEARMS



ORDERING INFORMATION

TO ORDER: Specify description and ordering references.

DESCRIPTION	ORDERING REFERENCES
TOGGLE BOLT ASSEMBLY	L&W PART No. 1563-X STD. PACKAGE: 3 PER BOX
BLACK WIRE TIES	L&W PART No. 1606 STD. PACKAGE: 50 PER BAG
MOUNTING HARDWARE BAG (CONTAINS ALL REQUIRED HARDWARE TO MOUNT AN AG1 GATEARM)	L&W PART No. 1604-X

L&W industries, inc.
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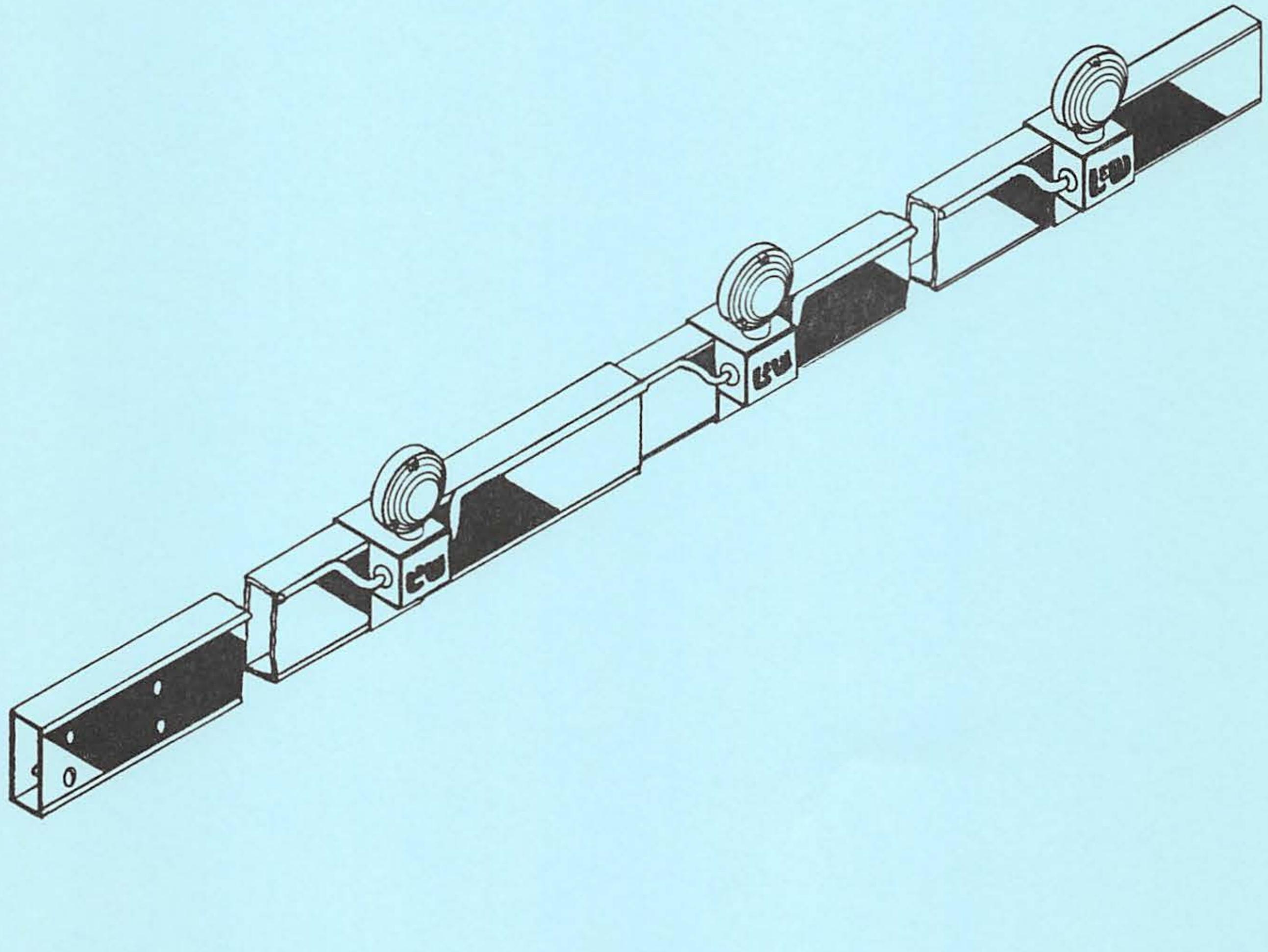
Springfield, MO 65802
417/864-5411

FG1
ADJUSTABLE FIBERGLASS GATEARM



SEPT, 1987

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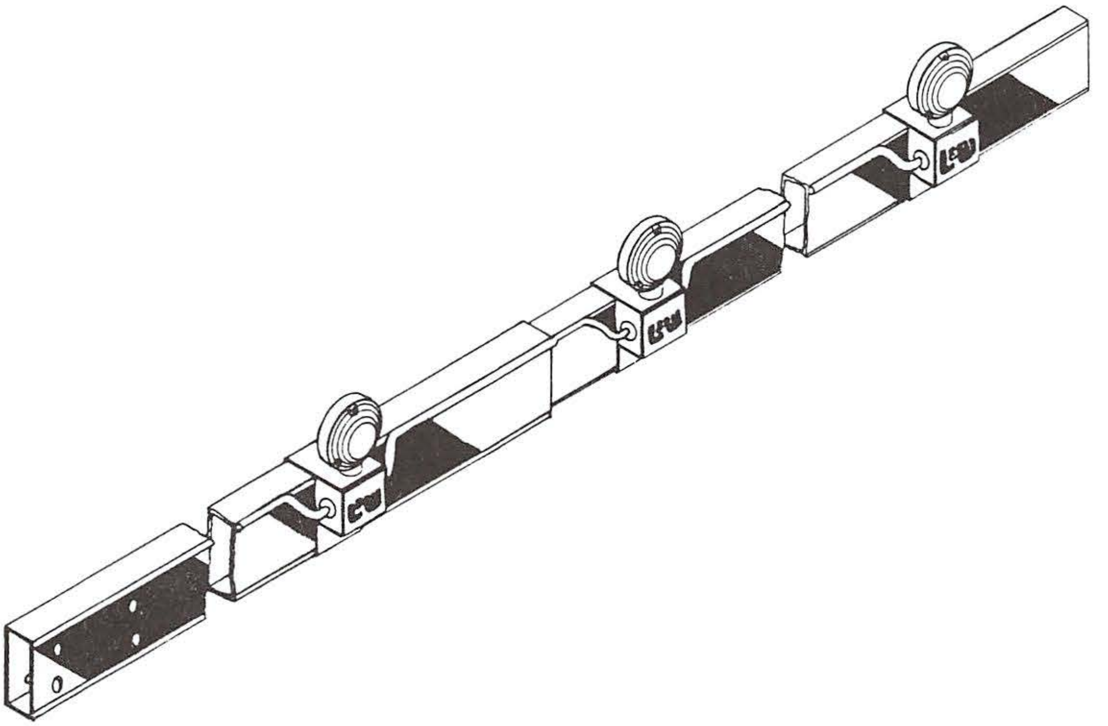
417/864-5411

L&W industries, inc.

FG1
ADJUSTABLE FIBERGLASS GATEARM



L&W FG1 Adjustable Fiberglass Gatearms are constructed of two sections of Fiberglass and are available in two standard lengths: 8ft to 16ft, and 16ft to 32ft. All L&W Adjustable Fiberglass Gatearms are available with a choice of High Intensity or Engineering Grade Reflex Reflective Stripes.

The FG1 Gatearms are easy to assemble. The only tools needed are small hand tools, such as a pocket knife, a terminal wrench, and a small crecent wrench. All holes required for mounting the gatearm, running the wire, and adjusting the length are predrilled in the factory.

The FG1 Gatearms are truly designed for one man to assemble and install.

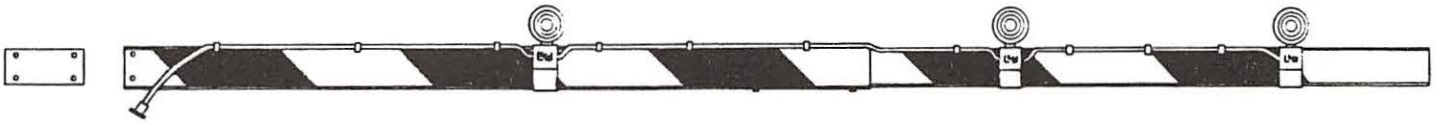
3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

L&W industries, inc.

L&W FG1 ADJUSTABLE FIBERGLASS GATEARM
8FT TO 16FT

GATE CONSISTS OF:

- 8ft Fiberglass Base Section
- 8ft Fiberglass Second Section
- Engineering Grade or High Intensity Reflex Reflective Stripes
- 3 Gatearm Lamps, 4 in or 7 in dia.
- 4-pin plug & receptacle assembly & cord
- Wire ties
- Aluminum Mounting Sleeve
- Toggle Bolts-2 each
- All required mounting hardware



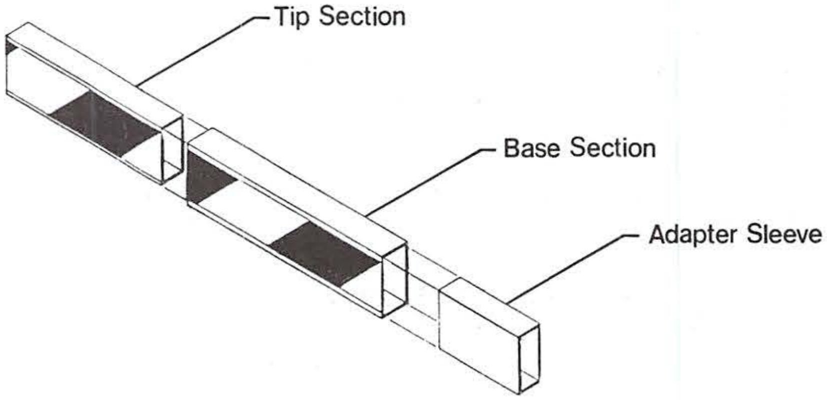
Track Side View

TO ORDER: Specify description, ordering reference, and diameter of Gatearm Lamps desired (4 in. or 7 in.). Refer to pages 9-B-8 and 9-B-9 for Gatearm Lamp ordering information.

DESCRIPTION	ORDERING REFERENCE
8ft to 16 ft FG1 Adjustable Fiberglass Gatearm with Engineering Grade Reflex Reflective Stripes	L&W A/N 1563-XRS
8ft to 16ft FG1 Adjustable Fiberglass Gatearm with High Intensity Reflex Reflective Stripes	L&W A/N 1563-XHS

L&W industries, inc.

REPLACEMENT SECTIONS
FOR L&W FG1 ADJUSTABLE FIBERGLASS GATEARMS
(8FT TO 16FT)



TO ORDER: Specify description and ordering reference.

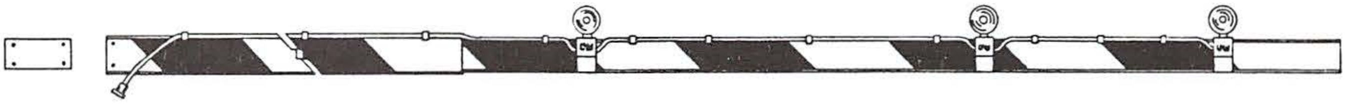
DESCRIPTION	ORDERING REFERENCE
Base Section-8ft Fiberglass With Engineering Grade Reflex Reflective Stripes	L&W P/N 1560-1RS
Base Section-8ft Fiberglass With High Intensity Reflex Reflective Stripes	L&W P/N 1560-1HS
Second Section-8ft Fiberglass With Engineering Grade Reflex Reflective Stripes	L&W P/N 1562-1RS
Second Section-8ft Fiberglass With High Intensity Reflex Reflective Stripes	L&W P/N 1562-1HS
Adaptor Sleeve (This sleeve is functional for both 8'-16' & 16'-32' FG1 gatearm)	L&W P/N 1564

3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

L&W FG1 ADJUSTABLE FIBERGLASS GATEARM
16FT TO 32FT

GATE CONSISTS OF:

- 16ft Fiberglass Base Section
- 16ft Fiberglass Second Section
- Engineering Grade or High Intensity Reflex Reflective Stripes
- 3 Gatearm Lamps, 4" or 7" diameter
- 4-pin plug & receptacle assembly & cord
- Wire ties
- Aluminum Mounting Sleeve
- Toggle Bolts-2 each
- All required mounting hardware



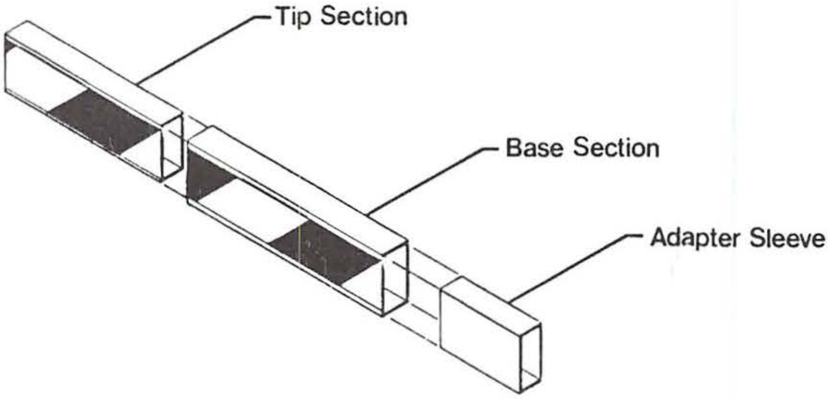
Track Side View

TO ORDER: Specify description, ordering reference, and diameter of Gatearm Lamps desired (4 in. or 7 in.). Refer to pages 9-H-8 and 9-H-9 for Gatearm Lamp ordering information.

DESCRIPTION	ORDERING REFERENCE
16ft to 32ft FG1 Adjustable Fiberglass Gatearm with Engineering Grade Reflex Reflective Stripes	L&W P/N 1565-XRS
16ft to 32ft FG1 Adjustable Fiberglass Gatearm with High Intensity Reflex Reflective Stripes	L&W P/N 1565-XHS

L&W industries, inc.

REPLACEMENT SECTIONS
FOR L&W FG1 ADJUSTABLE FIBERGLASS GATEARMS
(16FT TO 32FT)



TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Base Section-16ft Fiberglass with Engineering Grade Reflex Reflective Stripes	L&W P/N 1560-RS
Base Section-16ft Fiberglass With High Intensity Reflex Reflective Stripes	L&W P/N 1560-HS
Tip Section-16ft Fiberglass with Engineering Grade Reflex Reflective Stripes	L&W P/N 1562-HS
Tip Section- 16ft Fiberglass With High Intensity Reflex Reflective Stripes	L&W P/N 1562-HS
Adaptor Sleeve (This sleeve is functional for both 8ft-16ft & 16ft-32ft FG1 gatearm)	L&W P/N 1564

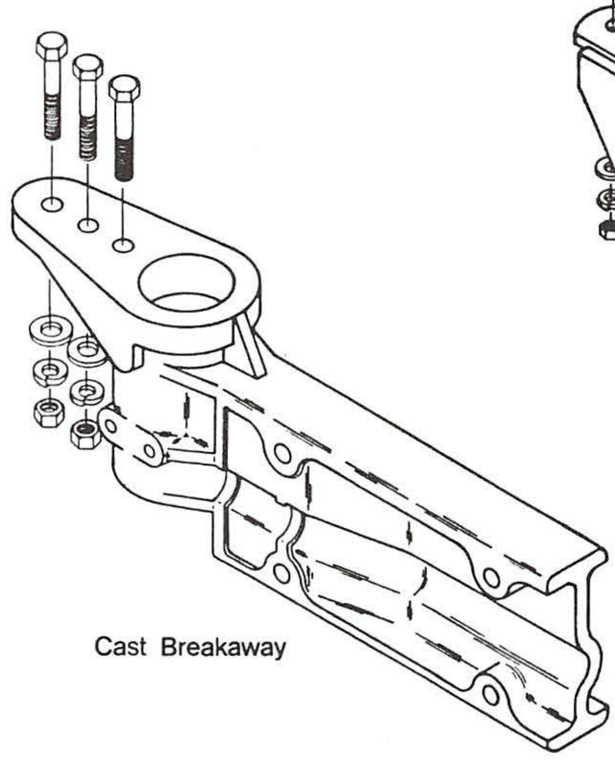
3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

L&W industries, inc.

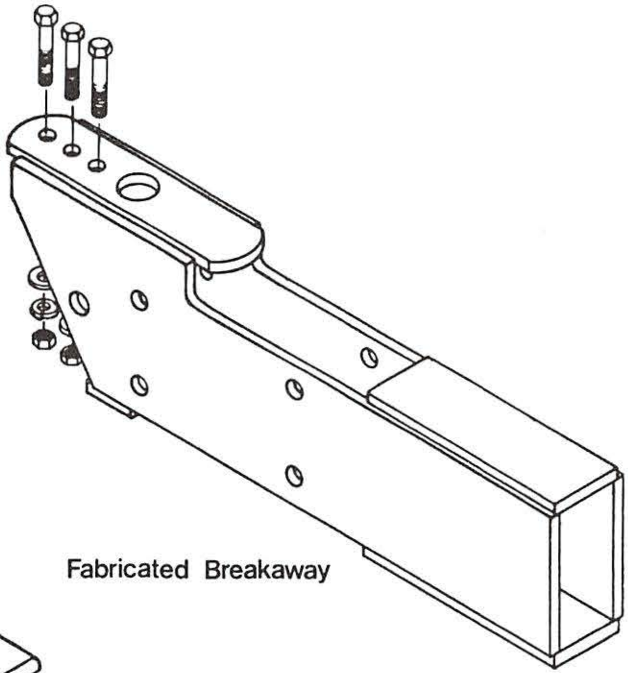
INFORMATION FOR MOUNTING L&W AG1, FG1, AF1 AND FF1 GATEARMS ONTO SAFETRAN BREAKAWAYS

SAFETRAN BREAKAWAYS

L&W AG1, FG1, AF1, AND FF1 Gatearms will mount on the Safetran Cast and Fabricated Breakaways shown without any additional adaptors. These parts are available from L&W. For additional information refer to catalog section 9-E.



Cast Breakaway



Fabricated Breakaway

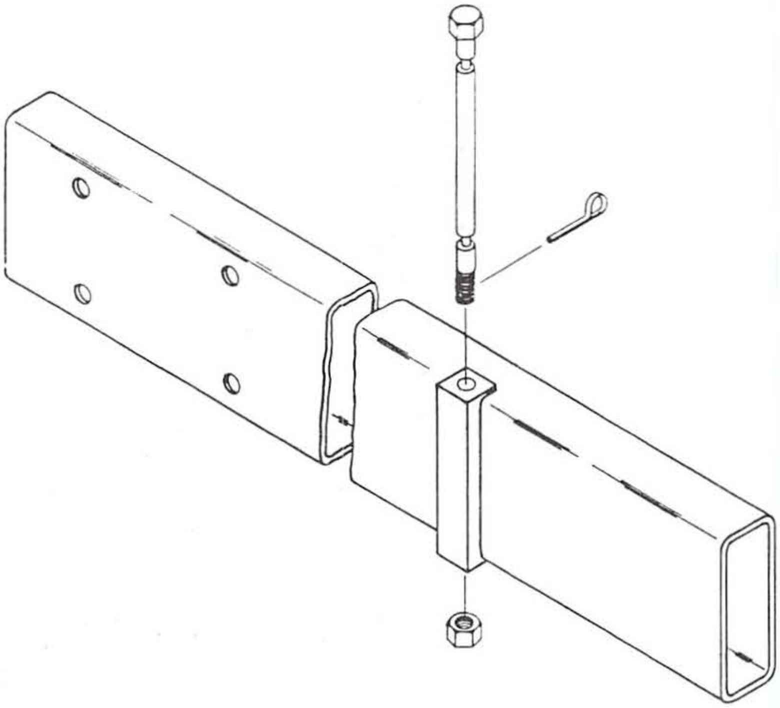
3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

L&W industries, inc.

INFORMATION FOR MOUNTING
L&W AG1, FG1, AF1 AND FF1 GATEARMS ONTO
WESTERN CULLEN AND US&S BREAKAWAYS

WESTERN CULLEN & US&S BREAKAWAYS

L&W AG1, FG1, AF1 and FF1 Gates will mount on the Western and US&S Breakaway with the use of the L&W Breakaway Sleeve.



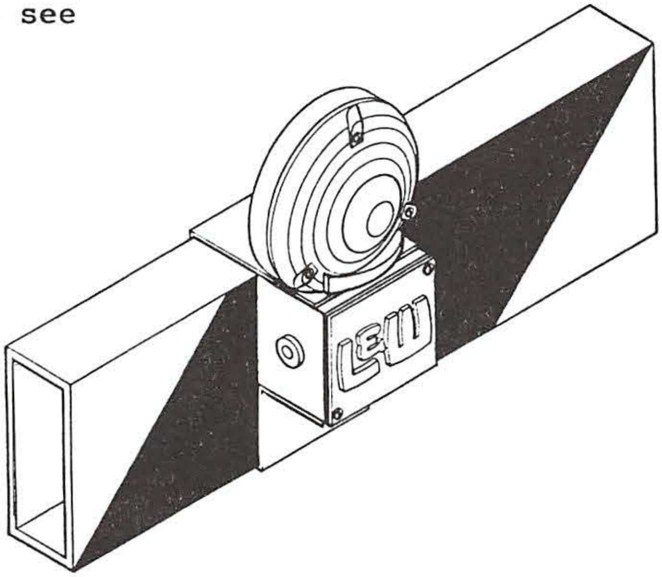
The L&W Breakaway Sleeve can be used on all Western Cullen-Hayes breakaways except for the earlier bi-directional models. See catalog section 9-E page 7 for ordering information.

If you wish to change out the older or new model W-C-H Breakaways to the L&W Cast Breakaway, please see catalog section 9-E, page 6 for ordering information on conversion adaptor.

L&W industries, inc.

L&W 4 INCH RIGID GATEARM LAMPS

- Red Plastic Lens
- Aluminum weatherproof box
- Mounting Bracket
- For replacement parts see catalog section 9-H



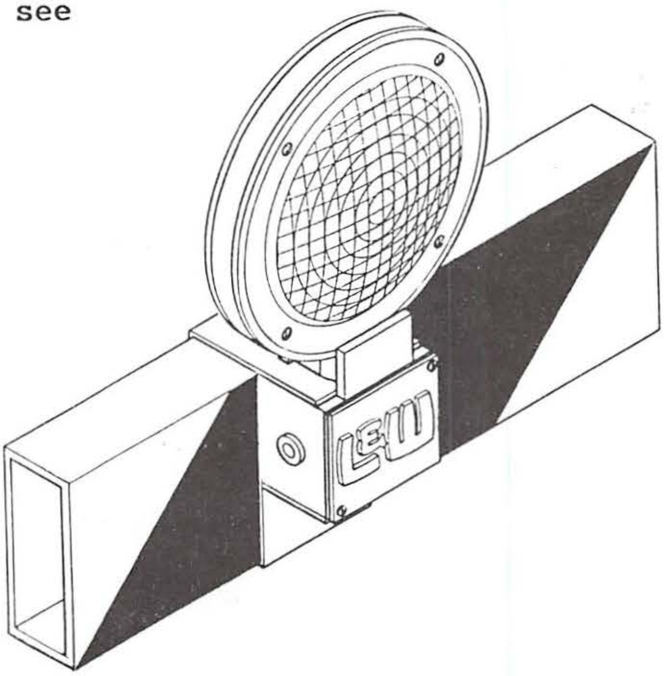
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
4 inch Adjustable Gatearm Lamp with Terminal Box and Rubber Grommets Standard package: 3 per box	L&W A/N 1030-X (without bulb) L&W A/N 1030-XB (with bulb)

L&W industries, inc.

L&W FG1 7 INCH GATEARM LAMP COMPLETE

- Red Plastic Lens
- Aluminum weatherproof box with Anti-Vandal guards
- Mounting Bracket
- For replacement parts see catalog section 9-H

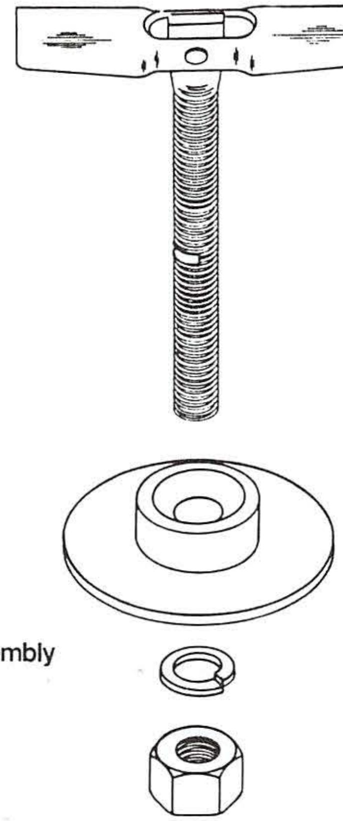


TO ORDER: Specify description and ordering references.

DESCRIPTION	ORDERING REFERENCE
7 inch Adjustable Gatearm Lamp with Terminal Box and Rubber Grommets Standard package: 3 per box	L&W A/N 1031-X (without bulb) L&W A/N 1031-XB (with bulb)

L&W industries, inc.

REPLACEMENT PARTS & MOUNTING HARDWARE FOR FG1 ADJUSTABLE FIBERGLASS GATEARMS



Toggle Bolt Assembly

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Toggle Bolt Assembly Standard package: 3 per box	L&W A/N 1563-X
Black Wire Ties Standard package: 50 per bag	L&W A/N 1606
Mounting Hardware Bag (Contains all required hardware to mount an FG1 Gatearm)	L&W A/N 1604-X

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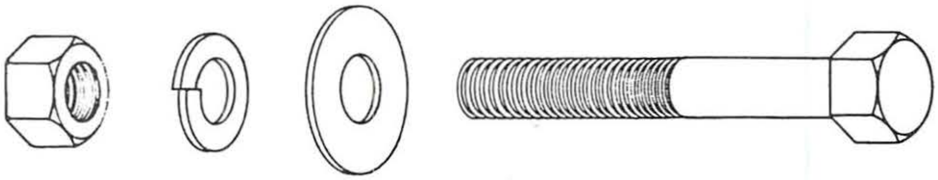
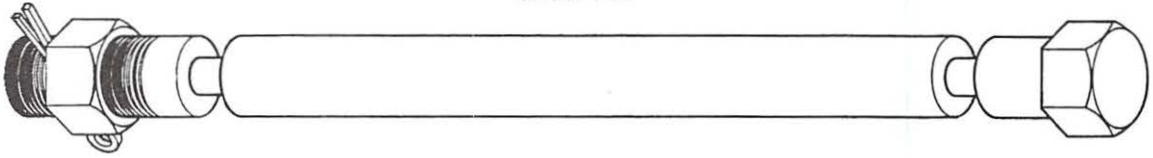
L&W industries, inc.

GATEARM SHEAR PINS AND SHEAR BOLTS

Shear Bolt



Shear Pin



TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Shear bolt for L&W and Safetran Cast and Fabricated Breakaways Cross Reference: Safetran No. 076215-X	L&W A/N 1570-X
Shear Pin for Western Cullen-Hayes and U.S.&S. Breakaways Cross Reference: W-C-H No. 3575-170-1 US&S No. 451071-4701	L&W A/N 1571-X
Shear Pin for Western Cullen-Hayes and U.S.&S. Breakaway for High Wind Conditions Cross Reference: W-C-H No. 3573-201-1	L&W A/N 1572-X

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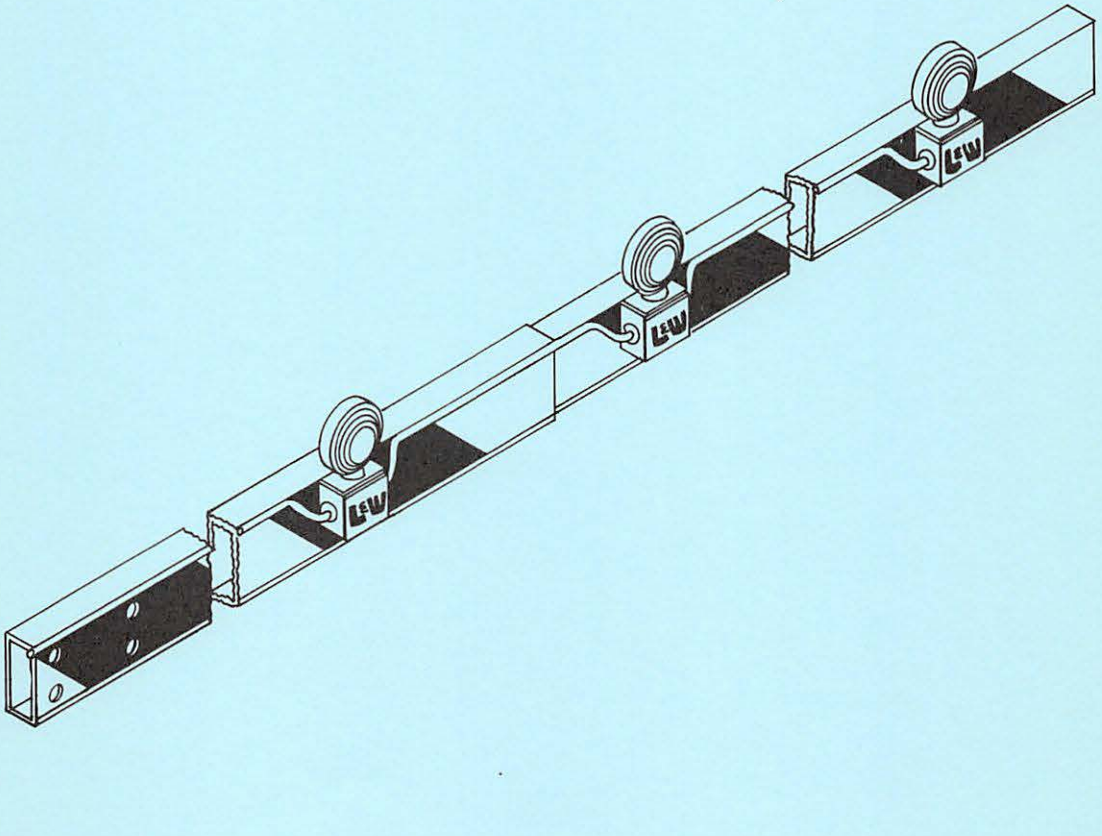
AF1

FIXED
ALUMINUM/FIBERGLASS GATEARM



October, 1985

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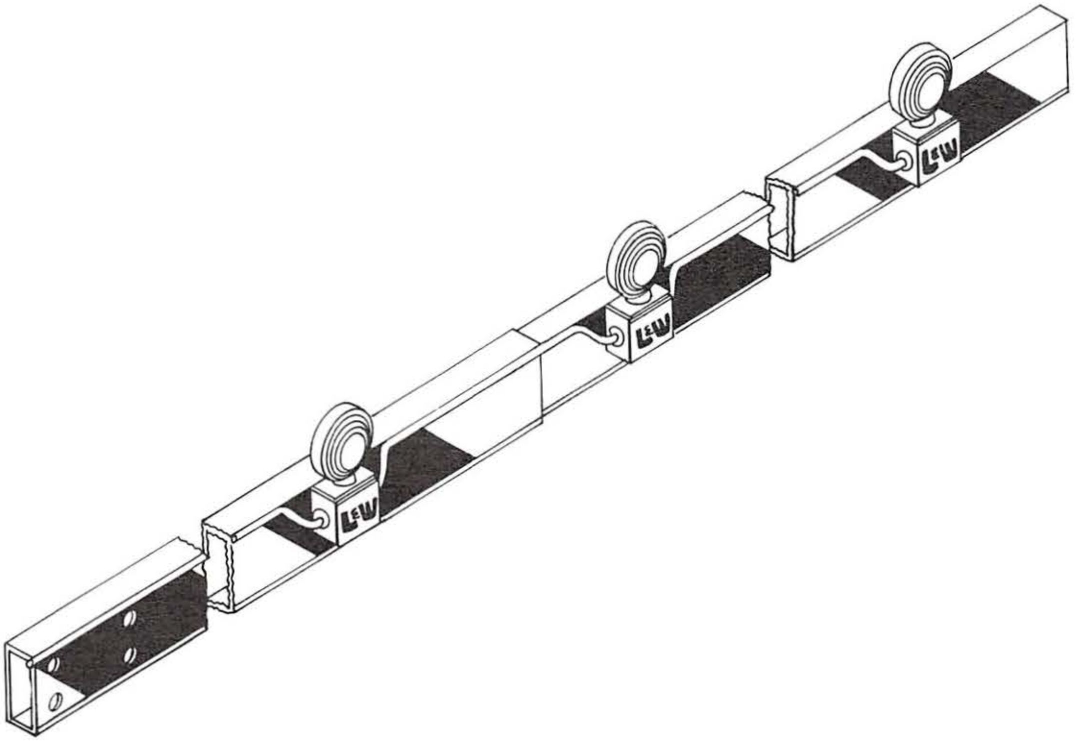
L&W industries, inc.

AF1

FIXED
ALUMINUM/FIBERGLASS GATEARM



AF1 is constructed of one section of extruded aluminum and one or two sections of pultruded fiberglass. Gatearm lengths of 10ft to 18ft come as one length of extruded aluminum. Gatearm lengths of 20ft to 28ft come as one length of extruded aluminum and one length of pultruded fiberglass. Gatearm lengths of 30ft to 38ft come as one length of extruded aluminum and two lengths of pultruded fiberglass.

All AF1 Gatearms come assembled to length with Red and White Reflex Reflective Stripes and 4in. or 7in. diameter gatearm lights.

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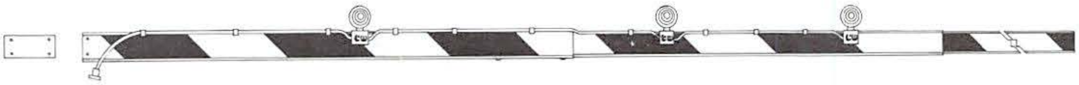
L&W industries, inc.

L&W AF1 FIXED ALUMINUM/FIBERGLASS GATEARM
10FT TO 38FT

GATE CONSISTS OF:

- Aluminum Base Section
- Fiberglass Second Section
- Fiberglass Third Section
- Engineering Grade or High Intensity Reflex Reflective Stripes
- 3 Gatelamps, 4in. or 7in. diameter
- 4-pin plug and receptacle assembly and cord
- Aluminum mounting Sleeve
- All required mounting hardware



TRACK SIDE VIEW

TO ORDER: Specify description and ordering reference. Replace ## in the part number with the length of the gatearm desired. For example, to order a 24ft AF1 Fixed Gatearm with 4in. diameter Gatelamps, specify: 24ft AF1 Fixed Aluminum/ Fiberglass Gatearm, Engineering Grade Reflex Reflective Stripes, with 4in. diameter Gatelamps; Part No. 1566-24XRS.

DESCRIPTION	ORDERING REFERENCE
10ft to 38ft AF1 Fixed Aluminum/ Fiberglass Gatearm with Engineering Grade Reflex Reflective Stripes	L&W P/N 1566-##XRS Specify 4in or 7in dia. Gatelamps
10ft to 38ft AF1 Fixed Aluminum/ Fiberglass Gatearm with High Intensity Reflex Reflective Stripes	L&W P/N 1566-##XHS Specify 4in. or 7in. dia. Gatelamps

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L&W industries, inc.

REPLACEMENT SECTIONS
FOR L&W AF1 FIXED ALUMINUM/FIBERGLASS GATEARMS
10FT TO 38FT

AF1 replacement sections are available with either Engineering Grade or High Intensity Reflex Reflective Stripes and are predrilled for immediate installation.

TO ORDER: Specify description & ordering reference. Replace the ## in the part number with the length of the section desired. For example, to order a 13ft Base Section with Engineering Grade Reflex Reflective Stripes specify: 13ft AF1 Aluminum Base Section with Engineering Grade Reflex Reflective Stripes, Part No. 1561-13RS.

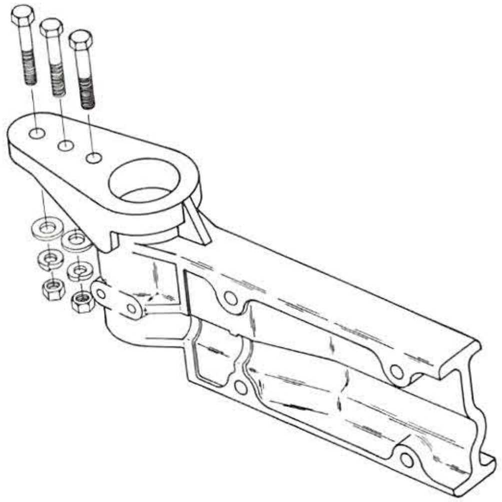
ITEM	DESCRIPTION	ORDERING REFERENCE
1	Base Section-Aluminum with Engineering Grade Reflex Reflective Stripes (##=8ft to 16ft)	L&W P/N 1561-##RS
	Base Section-Aluminum with High Intensity Reflex Reflective Stripes (##=8ft to 16ft)	L&W P/N 1561-##HS
2	2nd Section-Fiberglass with Engineering Grade Reflex Refective Stripes (##=3ft to 16ft)	L&W P/N 1562-##RS
	2nd Section-Fiberglass with High Intensity Reflex Reflective Stripes (##=3ft to 16ft)	L&W P/N 1562-##HS
3	3rd Section-Fiberglass with Engineering Grade Reflex Reflective Stripes (##=3ft to 8ft)	L&W P/N 1563-##RS
	3rd Section-Fiberglass with High Intensity Reflex Reflective Stripes (##=3ft to 8ft)	L&W P/N 1563-##HS
4	Adaptor Sleeve for 8ft to 22ft AF1 Gatearm	L&W P/N 1575-4
	Adaptor Sleeve for 24ft to 38ft AF1 Gatearm	L&W P/N 1575-8

L&W industries, inc.

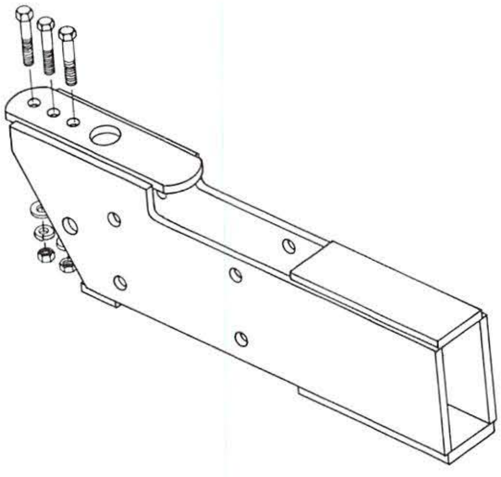
INFORMATION FOR MOUNTING L&W AG1, FG1, AF1 AND FF1 GATEARMS ONTO SAFETRAN BREAKAWAYS

SAFETRAN BREAKAWAYS

L&W AG1, FG1, AF1 and FF1 gatearms will mount on the Safetran Cast and Fabricated Breakaways shown without any additional adaptors.



CAST BREAKAWAY



FABRICATED BREAKAWAY

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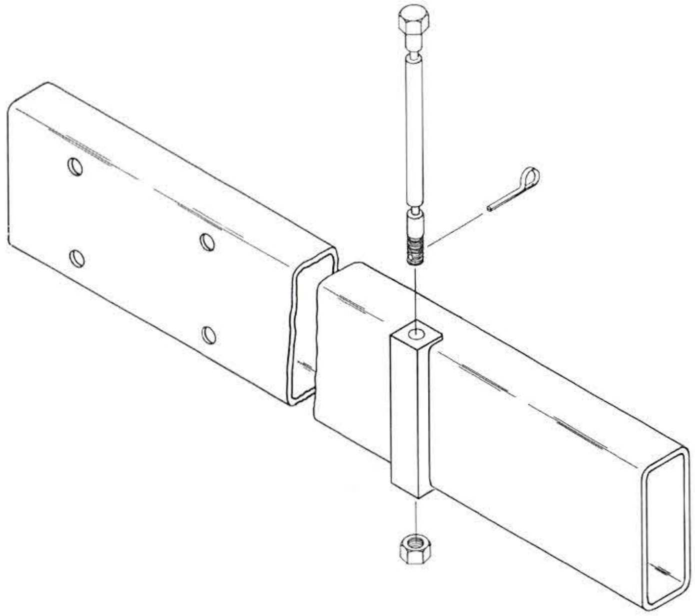
L&W industries, inc.

INFORMATION FOR MOUNTING L&W AG1, FG1, AF1 AND FF1 GATES ONTO WESTERN-CULLEN AND US&S BREAKAWAYS

WESTERN-CULLEN & US&S BREAKAWAYS

L&W AG1, FG1, AF1 and FF1 gates will mount on the Western-Cullen and US&S breakaways with the use of the L&W Breakaway Sleeve.



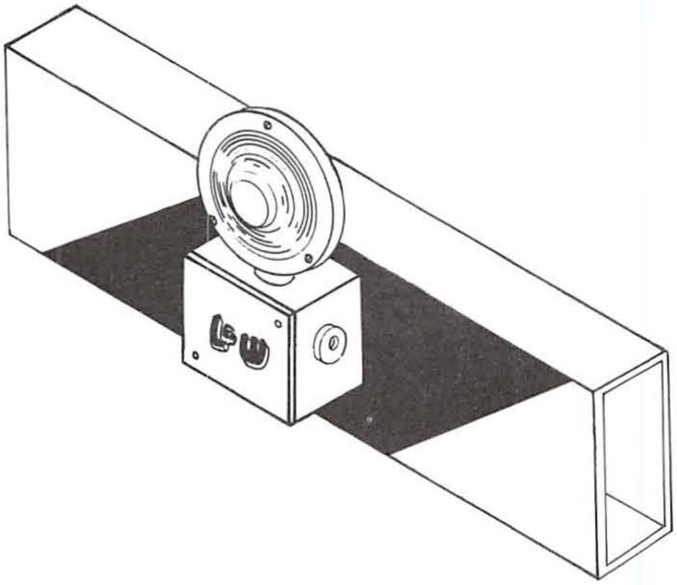
The L&W Breakaway Sleeve can be used on all Western-Cullen-Hayes breakaways except for the earlier bi-directional models. See catalog section 9-D page 7 for ordering information.

If you wish to change out the older or new model W-C-H breakaways to the L&W Cast Breakaway, please see catalog section 9-D page 6 for ordering information on conversion adaptor.

L&W industries, inc.

L&W 4 INCH RIGID GATEARM LAMP

- All plastic lamp
- Aluminum weatherproof box
- Grommet cable entrances



ORDERING INFORMATION

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
4in. Rigid Gatearm Lamp with mounting hardware	L&W P/N 1017-X Std. package: 3 per box Safetran No. 075950-500X NEC No. 2018-1 W-C-H No. 1591-50

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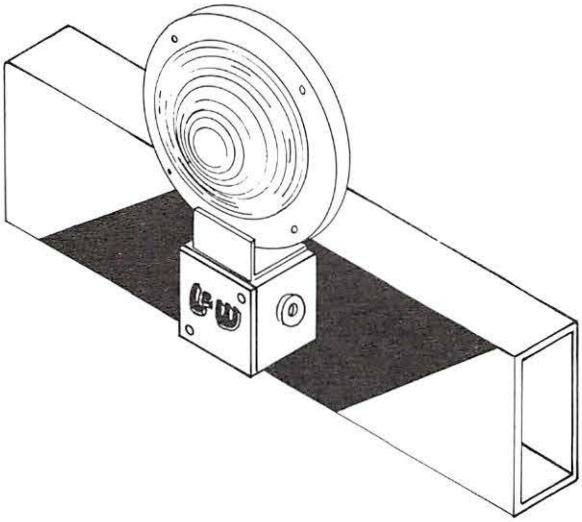
L&W industries, inc.

L&W 7 INCH RIGID GATEARM LAMP

- All plastic lamp
- Aluminum weatherproof box with Anti-Vandal ears
- Grommet cable entrances



ORDERING INFORMATION

TO ORDER: SPECIFY DESCRIPTION AND ORDERING REFERENCES.

DESCRIPTION	ORDERING REFERENCE
7in. Rigid Gatearm Lamp with mounting hardware	L&W P/N 1024-X Std. Package: 3ea per box SAFETRAN No. 075952-6X WABCO No. 451484-5401 W-C-H No. 1592

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REPLACEMENT PARTS AND MOUNTING HARDWARE FOR AF1 FIXED ALUMINUM/FIBERGLASS GATEARMS

MOUNTING HARDWARE BAG CONTAINS:

- 8 ea. insulated wire clamps
- 8 ea. No.8x3/4" sheet metal screws
- 4 ea. 3/8"-16x2-3/4" HEX head bolts
- 4 ea. 3/8"-16 HEX locknut
- 4 ea. 3/4" flat washer
- 2 ea. 1/4"-20x2-3/4" HEX head bolts
- 2 ea. 1/4"-20 HEX locknut
- 4 ea. 3/8" flat washer

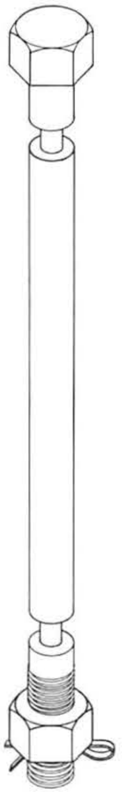
ORDERING INFORMATION

TO ORDER: SPECIFY DESCRIPTION AND ORDERING REFERENCES.

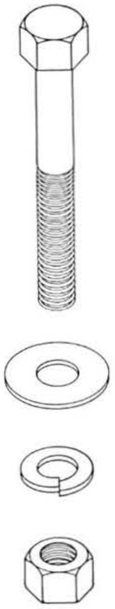
DESCRIPTION	ORDERING REFERENCES
MOUNTING HARDWARE BAG (Contains all required hardware to mount an AF1 gatearm)	L&W P/N 1601-X

L&W industries, inc.

GATEARM SHEAR PINS AND SHEAR BOLTS



Shear Pin



Shear Bolt

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Shear bolt for L&W and Safetran Cast and Fabricated Breakaways	L&W P/N 1570-X Safetran P/N 076215-X
Shear Pin for Western Cullen-Hayes and U.S.&S. Breakaway	L&W P/N 1571-X W-C-H P/N 3575-170-1 US&S P/N 451071-4701
Shear Pin for Western Cullen-Hayes and U.S.&S. Breakaway for High Wind Conditions	L&W A/N 1572-X W-C-H P/N 3575-201-1

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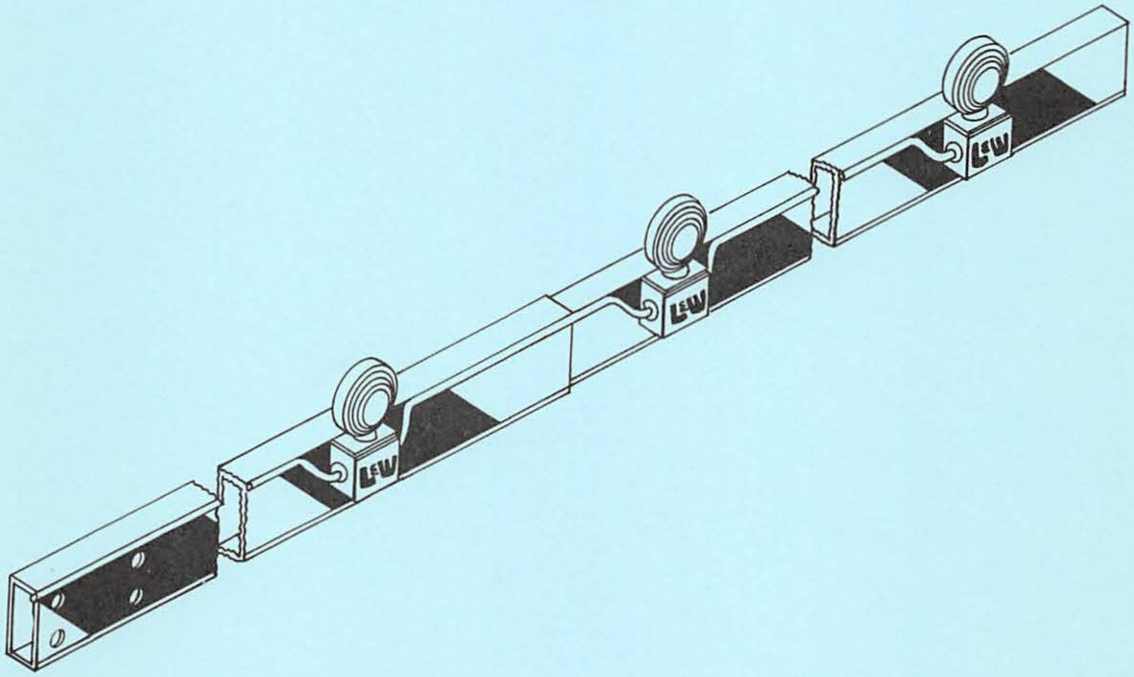
industries, inc. 9D

FF1

FIXED FIBERGLASS GATEARM



October, 1985

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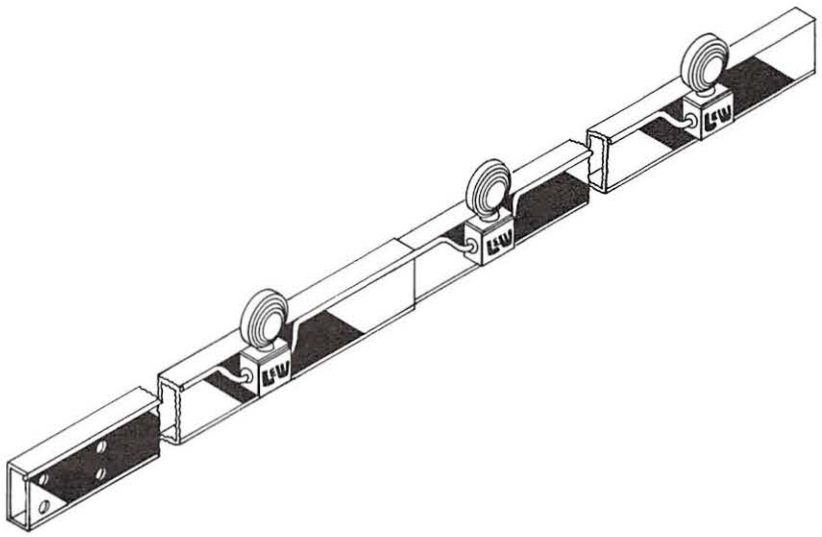
L&W industries, inc.

FF1

FIXED
FIBERGLASS GATEARM



FF1 is constructed of all pultruded fiberglass. Gatearm lengths of 10ft to 18ft come as one length of pultruded fiberglass. Gatearm lengths of 20ft to 28ft come as two lengths of pultruded fiberglass. Gatearm lengths of 30ft to 38ft come as three lengths of pultruded fiberglass.

All FF1 Gatearms come assembled to length with Red and White Reflex Reflective Stripes and 4in. or 7in. diameter Gatearm Lights.

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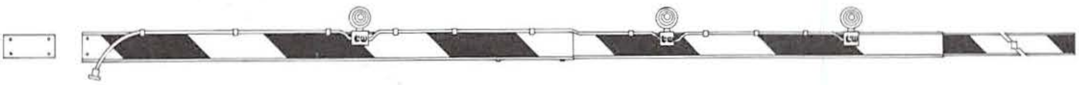
L&W industries, inc.

L&W FF1 FIXED FIBERGLASS GATEARM
10FT TO 38FT

GATE CONSISTS OF:

- Fiberglass Base Section
- Fiberglass Second Section
- Fiberglass Third Section
- Engineering Grade or High Intensity Reflex Reflective Stripes
- 3 Gatelamps, 4in. or 7in. diameter
- 4-pin plug and receptacle assembly and cord
- Aluminum mounting Sleeve
- All required mounting hardware



TRACK SIDE VIEW

TO ORDER: SPECIFY DESCRIPTION AND ORDERING REFERENCE. Replace ## in the part number with the length of the gatearm desired. For example, to order a 24ft FF1 Fixed Fiberglass Gatearm with 4in diameter Gatelamps, specify: 24ft FF1 Fiberglass Gatearm, Engineering Grade Reflex Reflective Stripes, with 4in. diameter Gatelamps; Part No. 1560-24XRS.

DESCRIPTION	ORDERING REFERENCE
10ft to 38ft FF1 Fiberglass Gatearm with Engineering Grade Reflex Reflective Stripes	L&W P/N 1560-##XRS Specify 4in or 7in dia. Gatelamps
10ft to 38ft FF1 Fiberglass Gatearm High Intensity Reflex Reflective Stripes	L&W P/N 1560-##XHS Specify 4in. or 7in. dia. Gatelamps

L&W industries, inc.

REPLACEMENT SECTIONS
FOR L&W FF1 FIXED FIBERGLASS GATEARMS
10 FT TO 38 FT

FF1 Replacement Sections are available with either Engineering Grade or High Intensity Reflex Reflective Stripes and are Predrilled for Immediate Installation.

TO ORDER SPECIFY DESCRIPTION & ORDERING REFERENCE. Replace the ## in the part number with the length of the section desired. For example, to order a 13ft Base Section with Engineering Grade Reflex Reflective Stripes specify: 13ft FF1 Fiberglass Base Section with Engineering Grade Reflex Reflective Stripes, Part No. 1560-##RS.

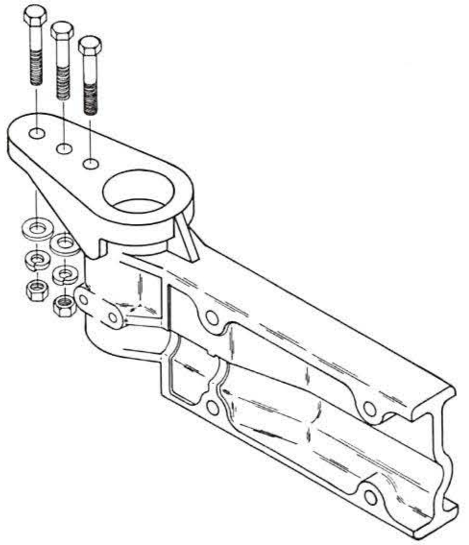
ITEM	DESCRIPTION	ORDERING REFERENCE
1	Base Section-Fiberglass with Engineering Grade Reflex Reflective Stripes (##=8ft to 16ft)	L&W P/N 1560-##RS
	Base Section-Fiberglass with High Intensity Reflex Reflective Stripes (##=8ft to 16ft)	L&W P/N 1560-##HS
2	2nd Section-Fiberglass with Engineering Grade Reflex Reflective Stripes (##=3ft to 16ft)	L&W P/N 1562-##RS
	2nd Section-Fiberglass with High Intensity Reflex Reflective Stripes (##=3ft to 16ft)	L&W P/N 1562-##HS
3	3rd Section-Fiberglass with Engineering Grade Reflex Reflective Stripes (##=3ft to 8ft)	L&W P/N 1563-##RS
	3rd Section-Fiberglass with High Intensity Reflex Reflective Stripes (3ft to 8ft)	L&W P/N 1563-##HS
4	Adaptor Sleeve for 8ft to 22ft FF1 Gatearm	L&W P/N 1575-4
	Adaptor Sleeve for 24ft to 38ft FF1 Gatearm	L&W P/N 1575-8

L&W industries, inc.

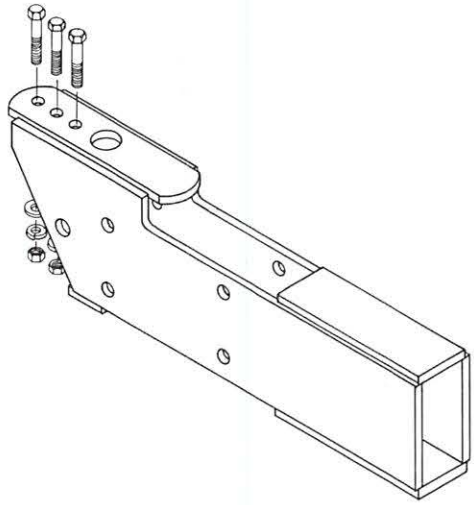
INFORMATION FOR MOUNTING L&W AG1, FG1, AF1, AND FF1 GATES ONTO SAFETRAN BREAKAWAYS

SAFETRAN BREAKAWAYS

L&W AG1, FG1, AF1 and FF1 gatearms will mount on the Safetran Cast and Fabricated Breakaways shown without any additional adaptors.



CAST BREAKAWAY



FABRICATED BREAKAWAY

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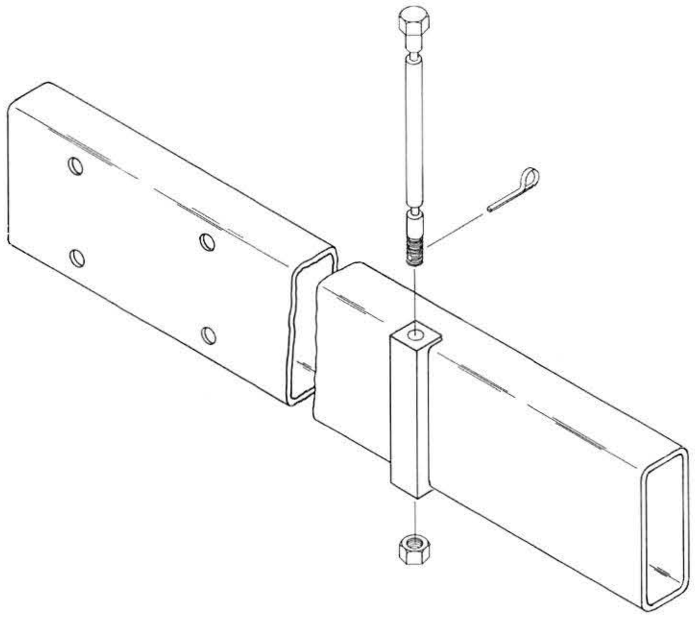
INFORMATION FOR MOUNTING L&W AG1, FG1, AF1 AND FF1 GATES ONTO WESTERN-CULLEN AND US&S BREAKAWAYS

WESTERN-CULLEN & US&S BREAKAWAYS

L&W AG1, FG1, AF1 and FF1 gates will mount on the Western-Cullen and US&S breakaways with the use of the L&W Breakaway sleeve.



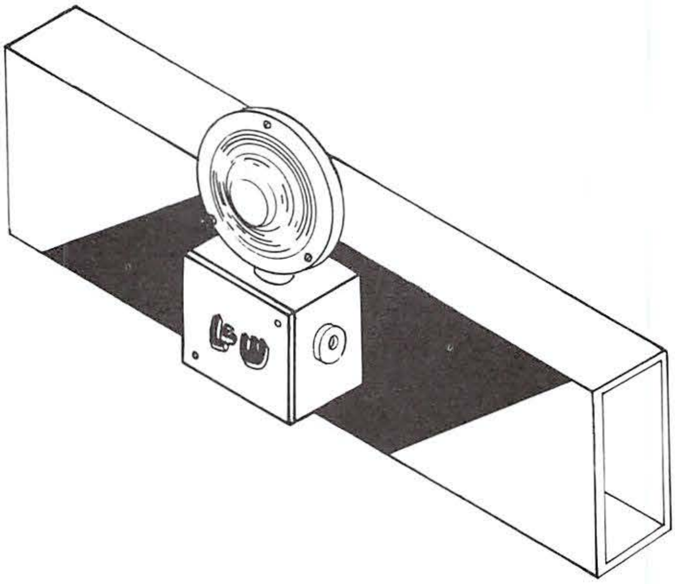
The L&W Breakaway sleeve can be used on all Western-Cullen-Hayes breakaways except for the earlier bi-directional models. See catalog section 9-D page 7 for ordering information.

If you wish to change out the older or new model W-C-H breakaways to the L&W Cast Breakaway, please see catalog section 9-D page 6 for ordering information on conversion adaptor.

L&W industries, inc.

L&W 4 INCH RIGID GATEARM LAMP

- All plastic lamp
- Aluminum weatherproof box
- Grommet cable entrances



ORDERING INFORMATION

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
4in Rigid Gatearm Lamp	L&W P/N 1017-X Std. package: 3 per box SAFETRAN No. 075950-500X WESTERN No. 1591-50 NEG. No. 2018-1

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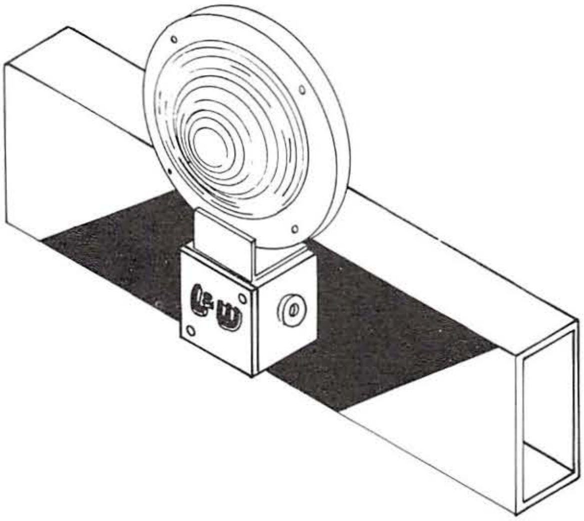
L&W industries, inc.

L&W 7 INCH RIGID GATEARM LAMP

- All plastic lens
- Aluminum weatherproof box with Anti-Vandal ears
- Grommet cable entrances



ORDERING INFORMATION

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Complete 7in. AG1 Rigid Gatearm Lamp	L&W P/N 1024-X SAFETRAN No. 075952-6X WESTERN No. 1592 WABCO No. 451484-5401 Std. Package: 3ea per box

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9-D-8

L&W industries, inc.

REPLACEMENT PARTS AND MOUNTING HARDWARE FOR FF1 FIBERGLASS GATEARMS

MOUNTING HARDWARE BAG CONTAINS:

- 8 ea. insulated wire clamps
- 8 ea. No.8x3/4" sheet metal screws
- 4 ea. 3/8"-16x2-3/4" HEX head bolts
- 4 ea. 3/8"-16 HEX locknut
- 4 ea. 3/4" flat washer
- 2 ea. 1/4"-20x2-3/4" HEX head bolts
- 2 ea. 1/4"-20 HEX locknut
- 4 ea. 3/8" flat washer

ORDERING INFORMATION

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
MOUNTING HARDWARE BAG (Contains all required hardware to mount an FF1 gatearm)	L&W P/N 1601-X

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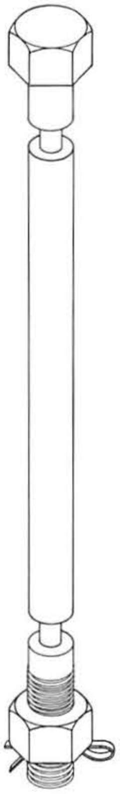
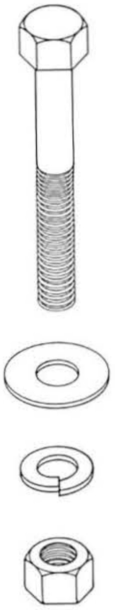
GATEARM SHEAR PINS AND SHEAR BOLTS



Shear Pin

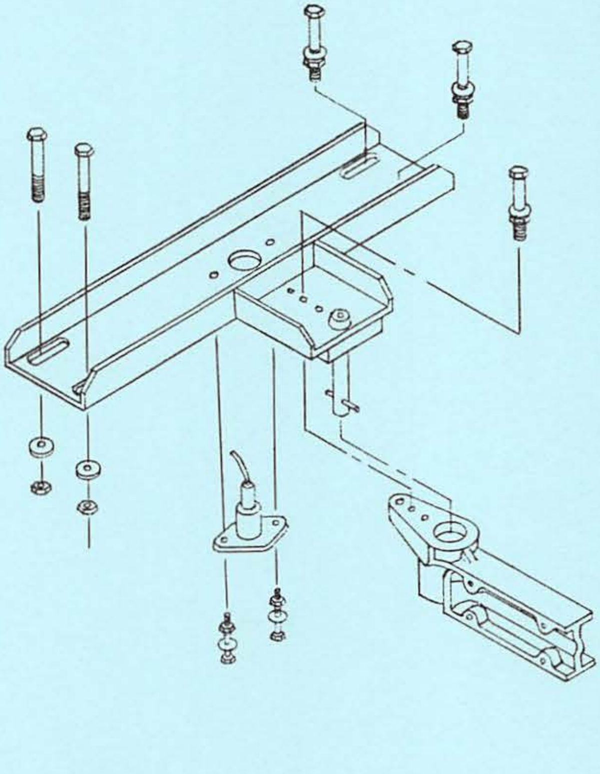


Shear Bolt

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Shear bolt for L&W and Safetran Cast and Fabricated Breakaways	L&W P/N 1570-X Safetran P/N 076215-X
Shear Pin for Western Cullen-Hayes and U.S.&S. Breakaway	L&W P/N 1571-X W-C-H P/N 3575-170-1 US&S P/N 451071-4701
Shear Pin for Western Cullen-Hayes and U.S.&S. Breakaway for High Wind Conditions	L&W A/N 1572-X W-C-H P/N 3575-201-1

GATEARM
CONVERSION BRACKETS
&
ADAPTERS

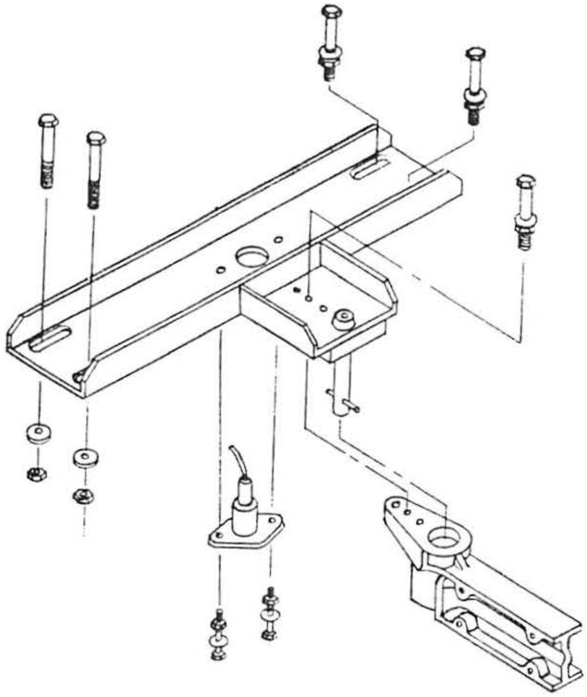


JUNE 1985

L&W INDUSTRIES, INC
3149 EAST CHESTNUT EXPRESSWAYS
SPRINGFIELD, MISSOURI 65801

L & W INDUSTRIES, INC.

CONVERSION BRACKET ASSEMBLIES

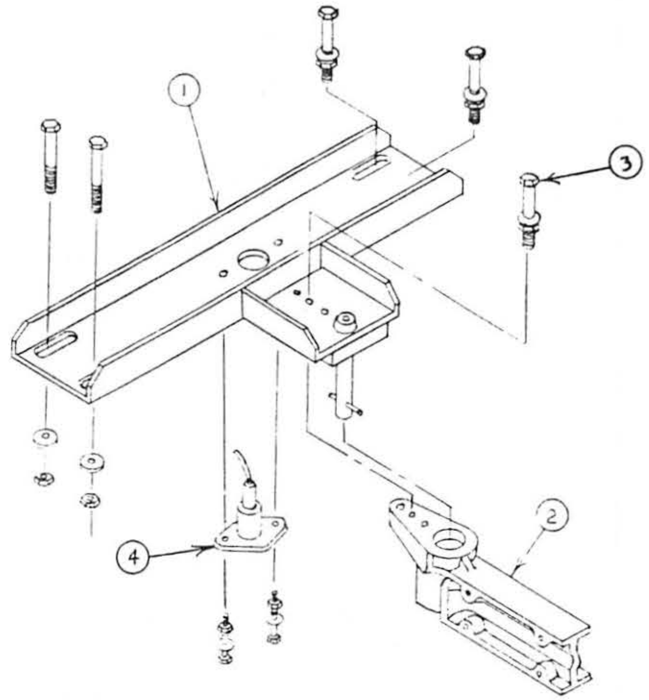


L & W conversion bracket assemblies are available for all gate mechanisms used today, & come with either cast or fabricated breakaways, shear bolts, & all required mounting hardware. Heavy gauge steel construction produces a conversion bracket assembly of high strength & long life.

L&W industries, inc.
3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

L & W INDUSTRIES, INC.

L&W CONVERSION BRACKET ASSEMBLY WITH CAST BREAKAWAY FOR ALL MAST MOUNTED GATE MECHANISMS



TO ORDER: Specify description & ordering references

ITEM #	QTY	DESCRIPTION	ORDERING REFERENCE
		COMPLETE CONVERSION BRACKET ASSEMBLY WITH CAST BREAKAWAY AND 3-SHEAR BOLTS	L & W P/N 1621-X
1	1	CONVERSION BRACKET ASSEMBLY WITH SOCKET, 3-SHEAR BOLTS, AND HARDWARE	L & W P/N 1587-X SAFETRAN P/N 076227-513X
2	1	CAST BREAKAWAY ASSEMBLY WITH 3-SHEAR BOLTS	L & W P/N 1574-X SAFETRAN P/N 076203-510X
3	3	SHEAR BOLT ASSEMBLY	L & W P/N 1570-X SAFETRAN P/N 076215-X
4	1	4-PIN PLUG RECEPTACLE ASSEMBLY	L & W P/N 1581-X

industries, inc.
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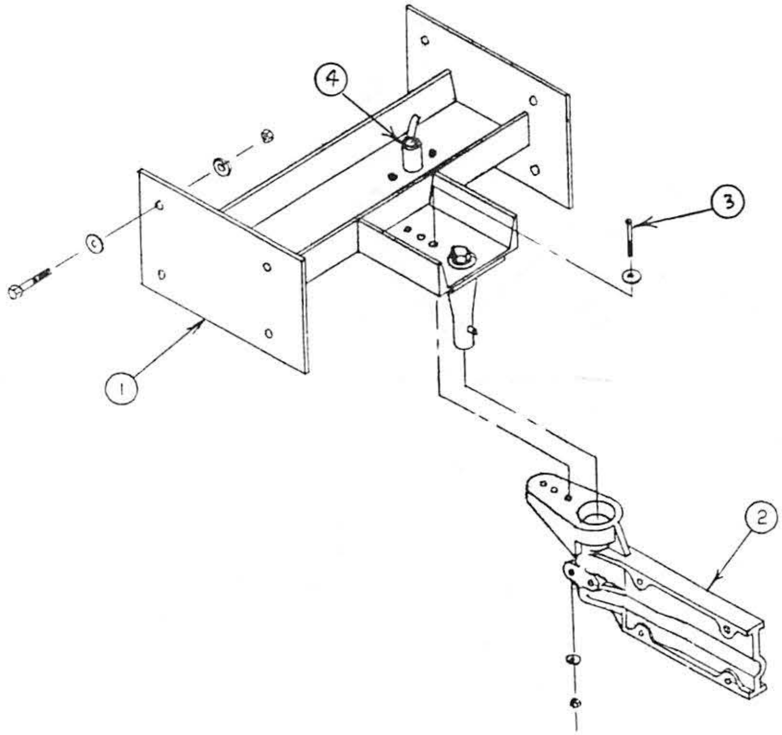
Springfield, MO 65802
417/864-5411

L & W INDUSTRIES, INC.

L&W CONVERSION BRACKET ASSEMBLY WITH CAST BREAKAWAY FOR EM PEDESTAL GATE

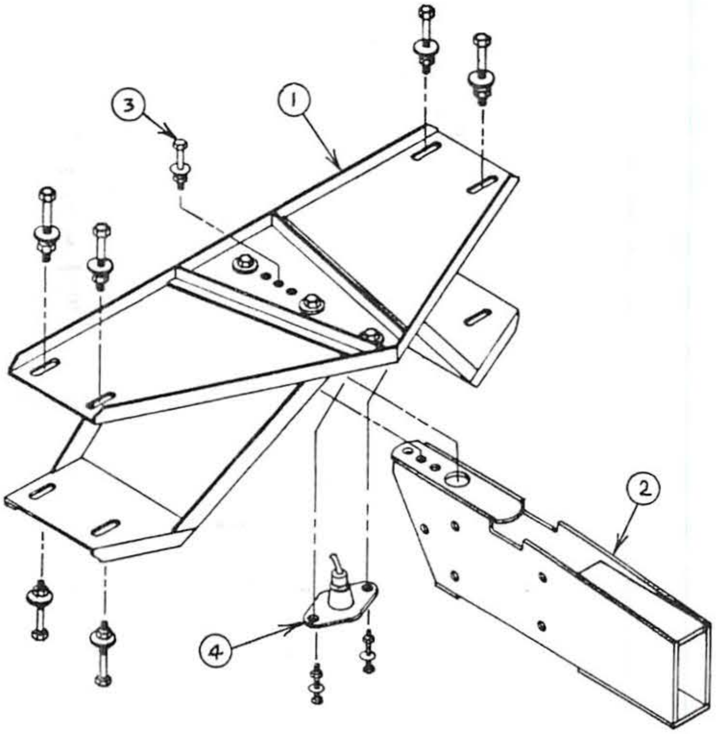


TO ORDER: Specify description & ordering references

ITEM #	QTY	DESCRIPTION	ORDERING REFERENCE
		COMPLETE CONVERSION BRACKET ASSEMBLY WITH CAST BREAKAWAY AND 3-SHEAR BOLTS	L & W P/N 1622-X ✓
1	1	CONVERSION BRACKET ASSEMBLY WITH SOCKET, 3-SHEAR BOLTS, AND HARDWARE	L & W P/N 1588-X SAFETRAN P/N 076227-500X
2	1	FABRICATED BREAKAWAY ASSEMBLY WITH 3-SHEAR BOLTS	L & W P/N 1574-X SAFETRAN P/N 076203-510X
3	3	SHEAR BOLT ASSEMBLY	L & W P/N 1570-X SAFETRAN P/N 076215-X
4	1	4-PIN PLUG RECEPTACLE ASSEMBLY	L & W P/N 1581-X

L & W INDUSTRIES, INC.

L&W CONVERSION BRACKET ASSEMBLY WITH FABRICATED BREAKAWAY FOR ALL MAST MOUNTED GATE MECHANISMS



TO ORDER: Specify description & ordering references

ITEM #	QTY	DESCRIPTION	ORDERING REFERENCE
		COMPLETE CONVERSION BRACKET ASSEMBLY WITH FABRICATED BREAK-AWAY, AND 3-SHEAR BOLTS	L & W P/N 1620-X
1	1	CONVERSION BRACKET ASSEMBLY WITH SOCKET, 3-SHEAR BOLTS, AND HARDWARE	L & W P/N 1589-X SAFETRAN P/N 076227-501X
2	1	FABRICATED BREAKAWAY ASSEMBLY WITH 3-SHEAR BOLTS	L & W P/N 1573-X SAFETRAN P/N 076203-501X
3	3	SHEAR BOLT ASSEMBLY	L & W P/N 1570-X SAFETRAN P/N 076215-X
4	1	4-PIN PLUG RECEPTACLE ASSEMBLY	L&W P/N 1581-X

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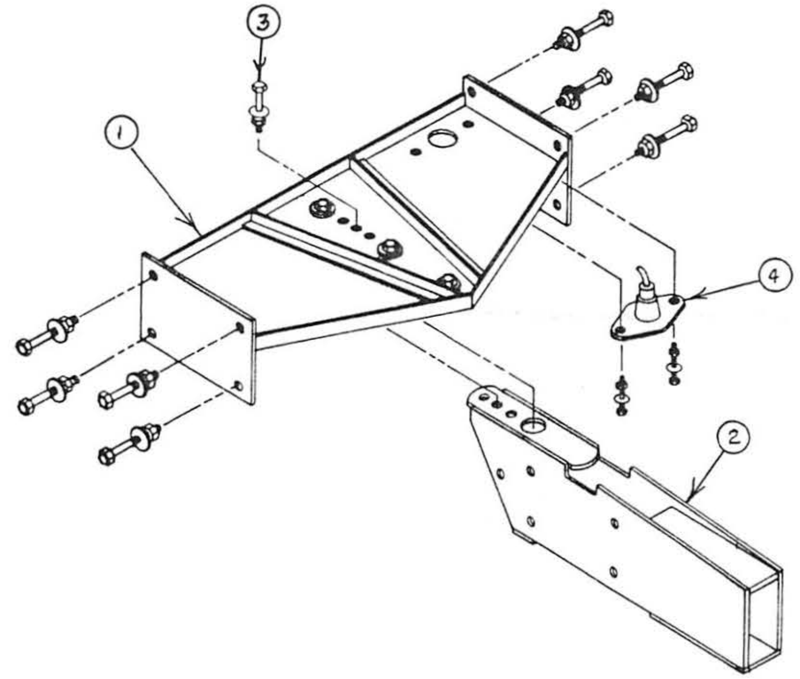
L&W INDUSTRIES, INC.

L&W CONVERSION BRACKET ASSEMBLY WITH FABRICATED BREAKAWAY FOR EM PEDESTAL GATE

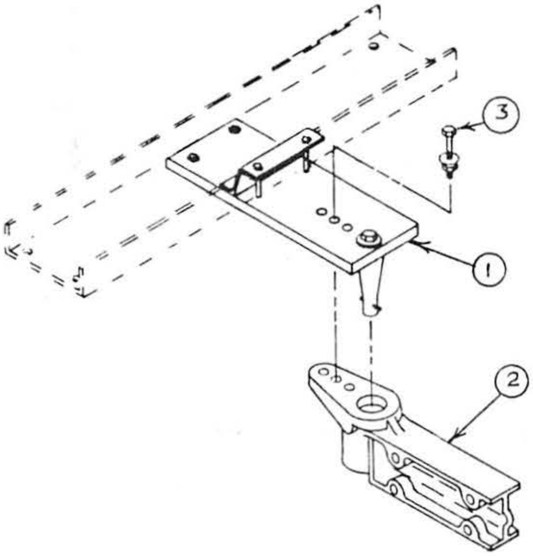


TO ORDER: Specify description & ordering references

ITEM #	QTY	DESCRIPTION	ORDERING REFERENCE
		COMPLETE CONVERSION BRACKET ASSEMBLY WITH FABRICATED BREAKAWAY AND 3-SHEAR BOLTS	L & W P/N 1623-X
1	1	CONVERSION BRACKET ASSEMBLY WITH SOCKET, 3-SHEAR BOLTS, AND HARDWARE	L & W P/N 1619-X SAFETRAN P/N 076227-501X
2	1	FABRICATED BREAKAWAY ASSEMBLY WITH 3-SHEAR BOLTS	L & W P/N 1573-X SAFETRAN P/N 076203-501X
3	3	SHEAR BOLT ASSEMBLY	L & W P/N 1570-X SAFETRAN P/N 076215-X
4	1	4-PIN PLUG RECEPTACLE ASSEMBLY	L & W P/N 1581-X

L & W INDUSTRIES, INC.

L&W CONVERSION BRACKET ASSEMBLY TO CONVERT A WESTERN GATEARM ADAPTER FOR USE WITH A CAST TYPE BREAKAWAY



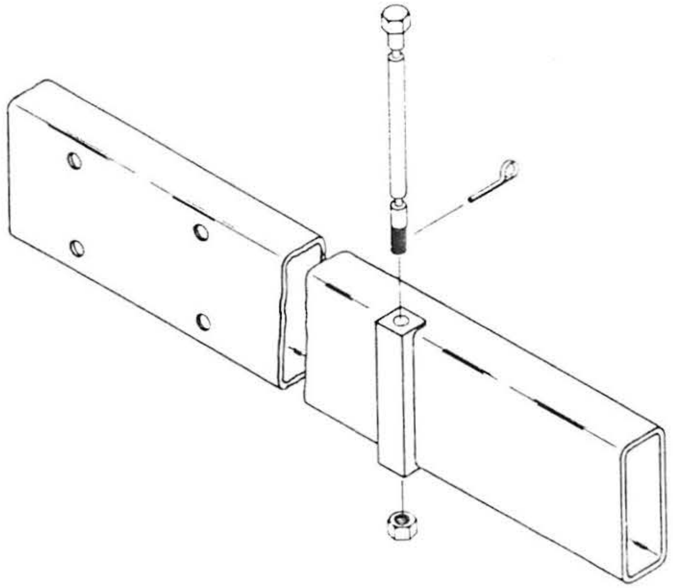
TO ORDER: Specify description & ordering references

ITEM #	QTY	DESCRIPTION	ORDERING REFERENCE
		WESTERN GATEARM ADAPTER CONVERSION BRACKET FOR CAST BREAKAWAY WITH BREAKAWAY WITH 3-SHEAR BOLTS	L & W P/N 1624-X
1	1	WESTERN GATEARM ADAPTER CONVERSION BRACKET FOR CAST BREAKAWAY	L & W P/N 1596-X
2	1	CAST BREAKAWAY ASSEMBLY WITH 3-SHEAR BOLTS	L & W P/N 1574-X
3	3	SHEAR BOLT ASSEMBLY	L & W P/N 1570-X SAFETRAN P/N 076215-X

L & W INDUSTRIES, INC.

L&W UNIVERSAL BREAKAWAY SLEEVE

The L & W universal breakaway sleeve is available to mount L & W AG1, fiberglass, or aluminum/fiberglass gate arms onto Western or Union adapters & can also be used as a direct replacement for the western adapter sleeve.



TO ORDER: Specify description & ordering reference.

DESCRIPTION	ORDERING REFERENCE
BREAKAWAY SLEEVE FOR MOUNTING AG1, FIBERGLASS OR ALUMINUM/ FIBERGLASS GATEARMS ONTO WESTERN OR UNION ADAPTERS, COMPLETE WITH SHEAR PINS	L & W P/N 1576-X WESTERN P/N 38-0026-44-2

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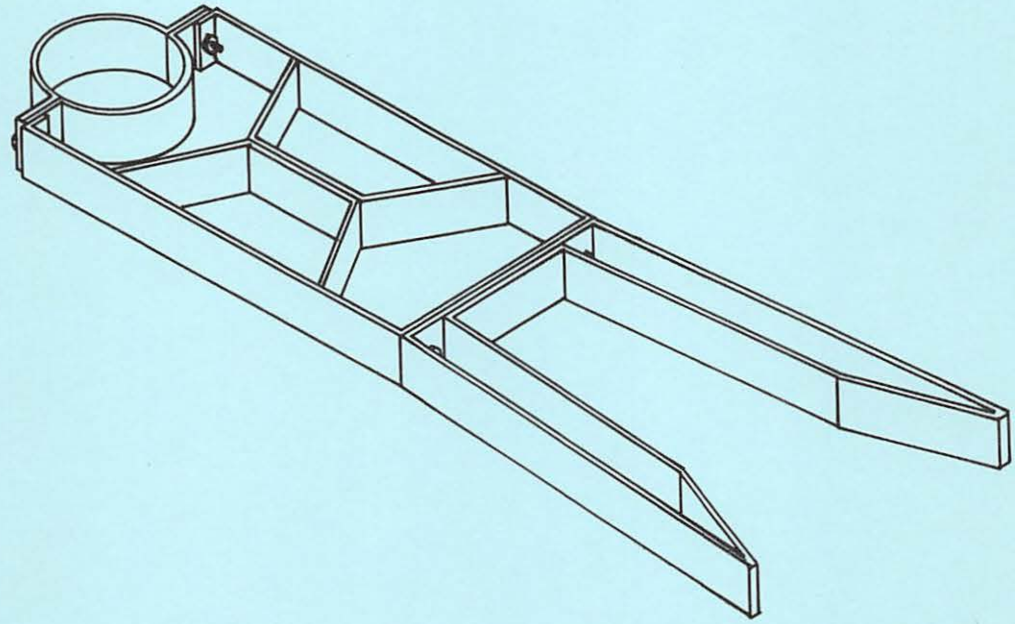
GATEARM

HIGH WIND GUARDS

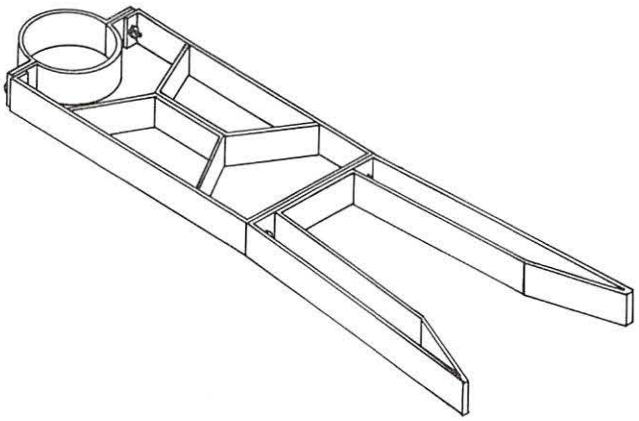


L & W INDS., INC.
3149 E. CHESTNUT EXPWAY.
SPRINGFIELD, MO 65802

JUNE 1985

L & W INDUSTRIES, INC.

HIGH WIND GUARDS



L & W High Wind Guards & High Wind Guard assemblies are designed to protect your fiberglass, combo, or AG1 gatearm from high winds while in the raised position. Heavy aluminum construction and stainless steel hardware combine to produce a high wind guard of high strength & long life.

High Wind Guard assemblies are available to provide protection for your fiberglass, combo, or AG1 gate arms mounted on stub mast or EM pedestal gates. L & W High Wind Guard assemblies fit right on existing stub mast or EM pedestal gates without special adapters. Installation can be accomplished using a standard hand crescent wrench.

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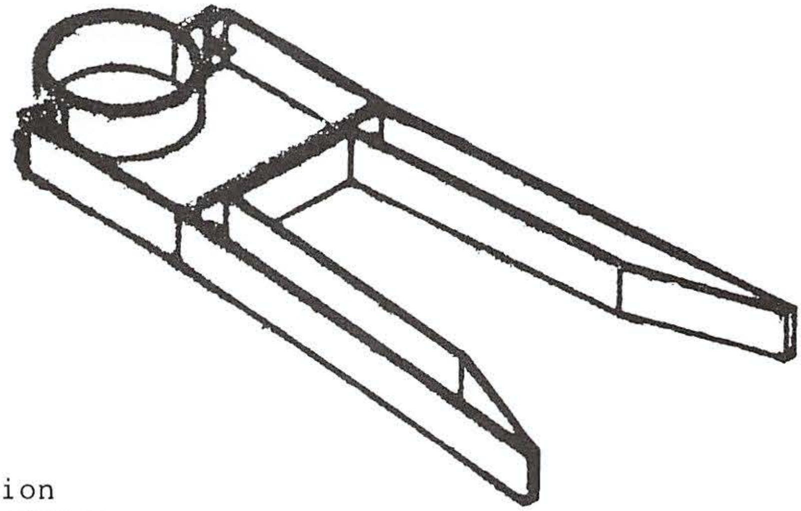
L & W INDUSTRIES, INC.

WIND GUARDS FOR 4 OR 5 INCH MASTS



-Aluminum construction
-Stainless steel hardware

ORDERING INFORMATION

TO ORDER: Specify description and ordering reference.

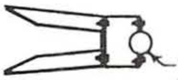
DESCRIPTION	ORDERING REFERENCE
High wind guard for 4 inch mast	L&W Part No. 5565-X
High wind guard for 5 inch mast	L&W Part No. 5565-1X

9-F-3

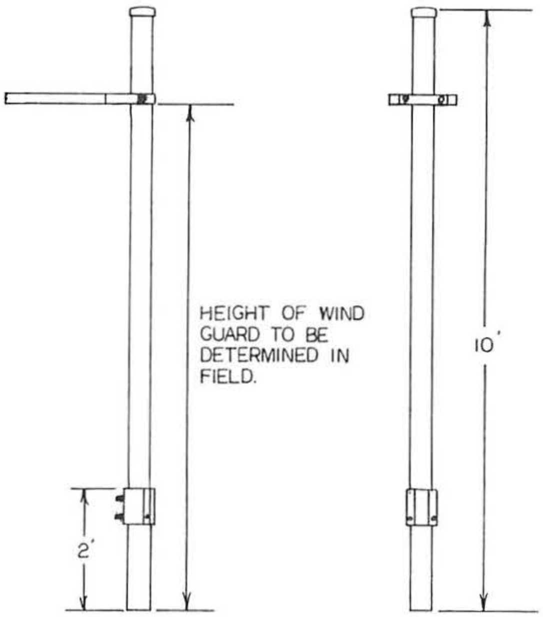
L & W INDUSTRIES, INC.

L&W HIGH WIND GUARD ASSEMBLY FOR MOUNTING ON STUB GATES

This high wind gaurd assembly has been designed to mount onto existing stub mast crossing gates. The lower portion of the extension mast slides inside the stub mast, providing two feet of overlap and and producing an eight foot extension to the stub mast. Bolts on the mast stop hold the high wind gaurd assembly in place. The high wind gaurd can also be bolted onto the mast at any desired height.


VIEW SHOWN
LESS PINNACLE

-ALUMINUM CONSTRUCTION
-STAINLESS STEEL HARDWARE



ORDERING INFORMATION

TO ORDER: Specify description and ordering references.

DESCRIPTION	ORDERING REFERENCES
High wind guard assembly for mounting on stub gates	L&W Part No. 5549-X

L&W industries, inc.
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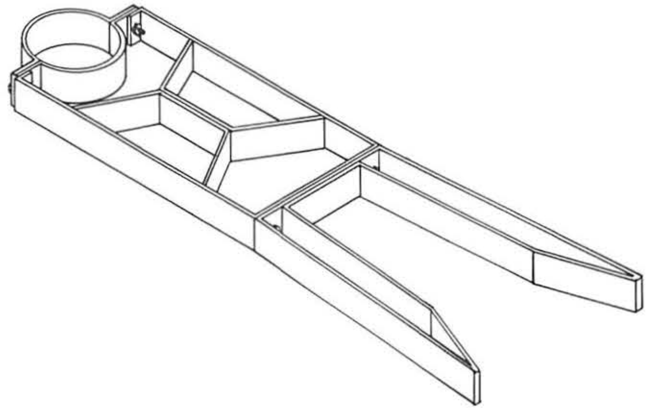
L & W INDUSTRIES, INC.

WIND GUARDS FOR 4 OR 5 INCH EM PEDESTAL GATE MASTS



-Aluminum construction
-Stainless steel hardware

ORDERING INFORMATION

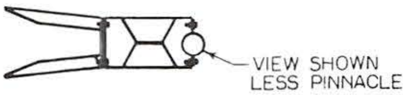
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
High wind guard for 4 inch mast EM pedestal gate complete with mounting hardware	L&W Part No. 5570-X
High wind guard for 5 inch mast EM pedestal gate complete with mounting hardware	L&W Part No. 5570-1X

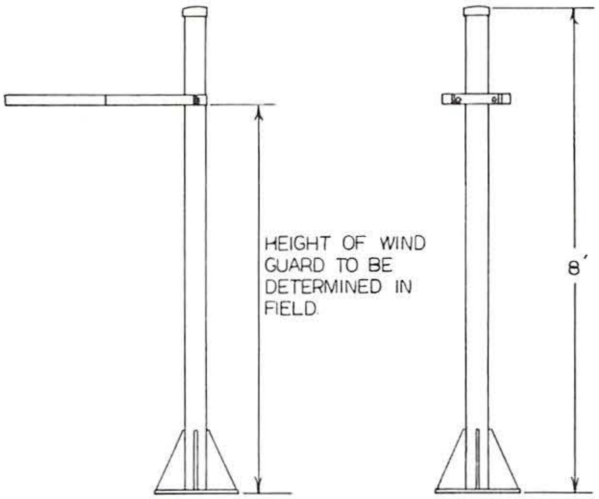
L & W INDUSTRIES, INC.

L&W HIGH WIND GUARD ASSEMBLY FOR MOUNTING ON EM PEDESTAL GATE

Mounts on existing EM pedestal housings, no adapters required. Mounting hardware included.


VIEW SHOWN LESS PINNACLE

- ALUMINUM CONSTRUCTION
- STAINLESS STEEL HARDWARE


HEIGHT OF WIND GUARD TO BE DETERMINED IN FIELD
8'

ORDERING INFORMATION

TO ORDER: Specify description and ordering references.

DESCRIPTION	ORDERING REFERENCE
High wind guard assembly for mounting on EM pedestal gate	L&W Part No. 5554-X

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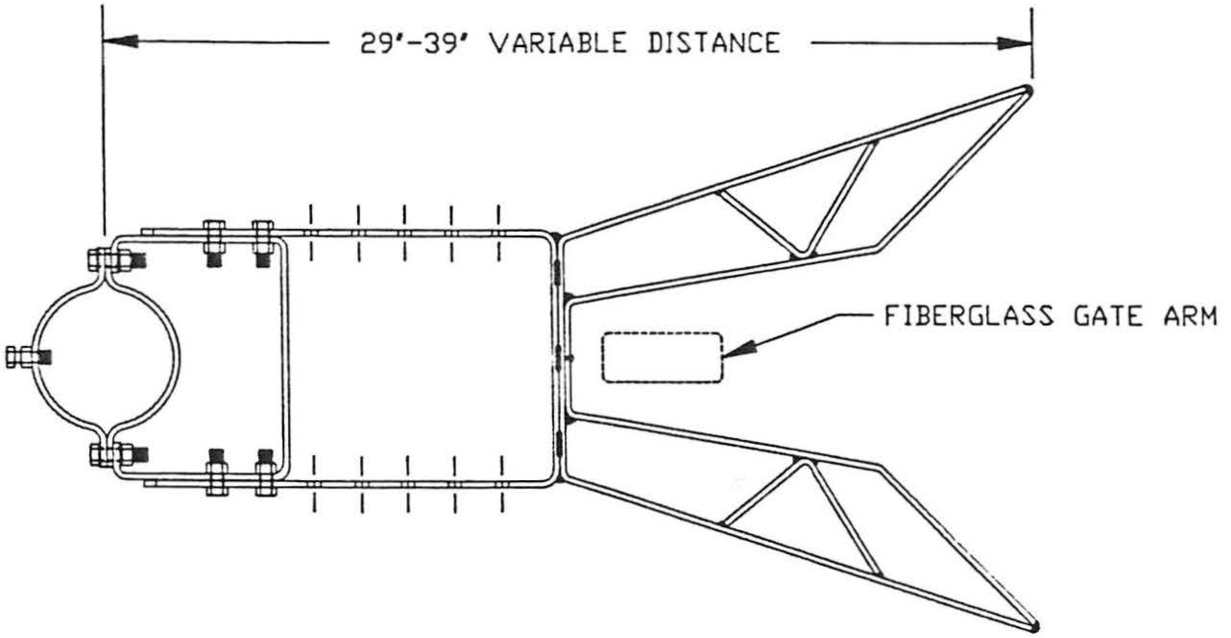
L&W INDUSTRIES, INC.

ADJUSTABLE HIGH WIND GUARD



- ADJUSTS 10 INCHES
- HEAVY ALUMINUM CONSTRUCTION
- STAINLESS STEEL HARDWARE
- FITS FIBERGLASS, COMBO & AG1 GATEARMS
- MOUNTS ON EXISTING STUB MAST OR EM PEDESTAL GATES
- EASY INSTALLATION

L & W Adjustable High Wind Guard & Adjustable High Wind Guard assemblies are designed to protect your fiberglass, combo, or AG1 gatearm from high winds while in the raised position. Heavy aluminum construction and stainless steel hardware combine to produce an adjustable high wind guard of high strength & long life.

Adjustable High Wind Guard assemblies are available to provide protection for your fiberglass, combo, or AG1 gatearms mounted on stub mast or EM pedestal gates. L & W Adjustable High Wind Guard assemblies fit right on the existing stub mast or EM pedestal gates without special adapters. Installation can be accomplished using a standard hand cresent wrench.

DESCRIPTION	ORDERING REFERENCE	PRICE
ADJUSTABLE HIGH WIND GUARD, FOR FIBERGLASS, COMBO OR AG1 GATEARMS ALUMINUM CONSTRUCTION & STAINLESS STEEL HARDWARE	L&W P/N 5565-2X	

3149 E. CHESTNUT EXPRESSWAY
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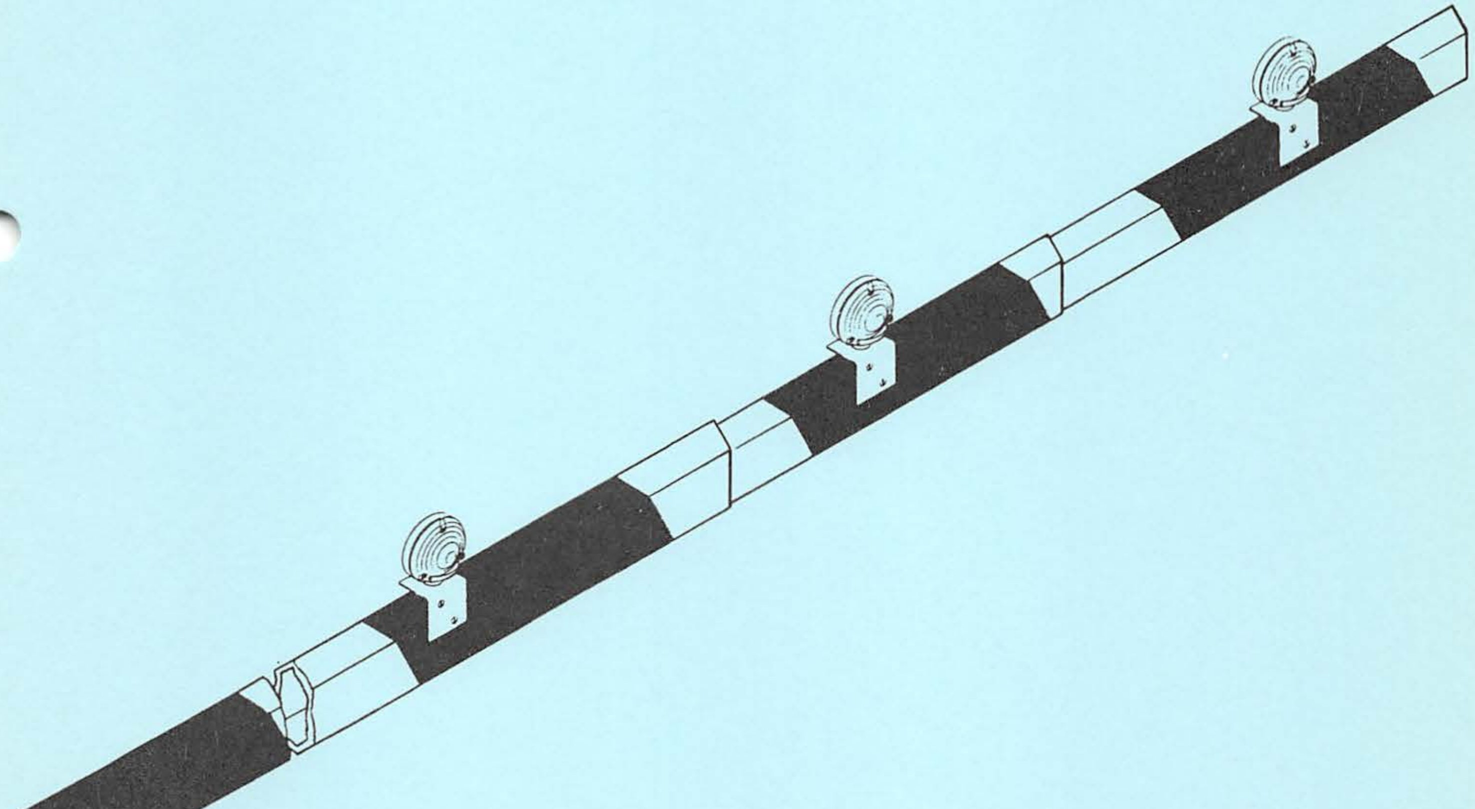
HEXAGON ALUMINUM/FIBERGLASS GATEARMS



OCT, 1987

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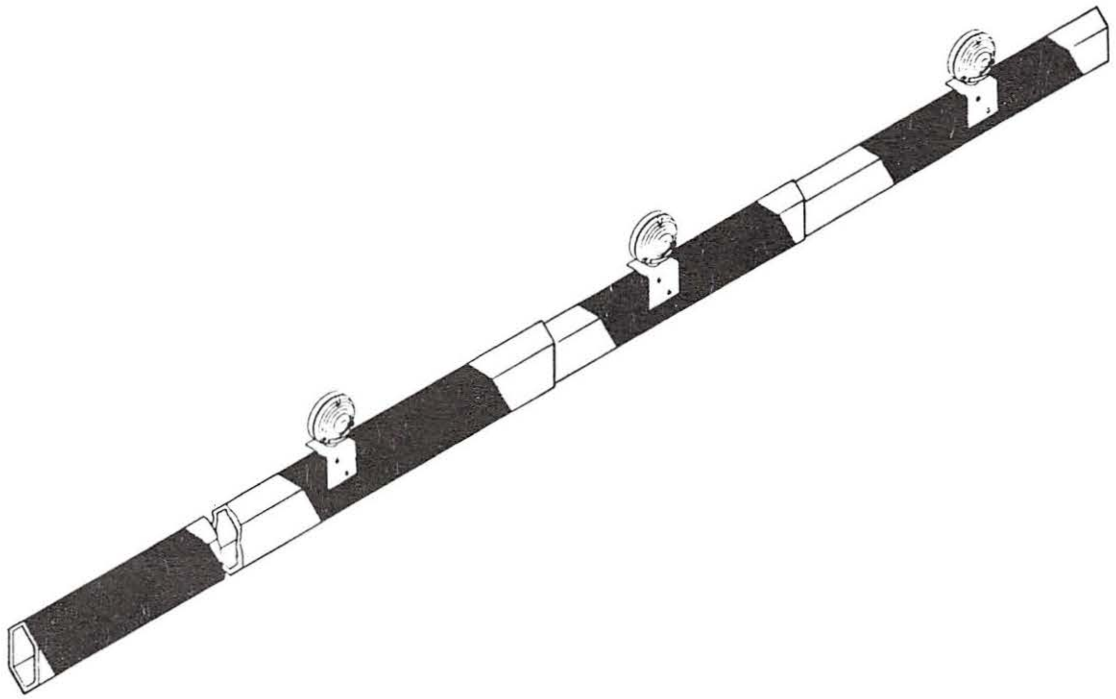
L&W industries, inc.

HEXAGON ALUMINUM/FIBERGLASS GATEARMS



L&W Hexagon Aluminum/Fiberglass Gatearms are constructed of one section of extruded aluminum and two sections of extruded fiberglass. The fiberglass sections telescope into the aluminum base section. L&W Hexagon Aluminum/Fiberglass Gatearms can be adjusted to any desired length from 16 feet to 46 feet.

3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

HEXAGON
ALUMINUM/FIBERGLASS GATEARMS, COMPLETE

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
16' to 32' Aluminum/Fiberglass Gatearm complete with Wiring, 4" Gatearm Lamps, 2 Shear Pins, and Engineering Grade Reflex Reflective Stripes Cross Reference: Union No. N451484-5707 Union No. N451484-5719	L&W A/N 1690-XRS
16' to 32' Aluminum/Fiberglass Gatearm complete with Wiring, 4" Gatearm Lamps, 2 Shear Pins, and High Intensity Reflex Reflective Stripes Cross Reference: Union No. N451484-5708 Union No. N451484-5720	L&W A/N 1690-XHS
16' to 32' Aluminum/Fiberglass Gatearm complete with Wiring, 7" Gatearm Lamps, 2 Shear Pins, and Engineering Grade Reflex Reflective Stripes Cross Reference: Union No. N451484-5709 Union No. N451484-5721	L&W A/N 1690-7XRS
16' to 32' Aluminum/Fiberglass Gatearm complete with Wiring, 7" Gatearm Lamps, 2 Shear Pins, and High Intensity Reflex Reflective Stripes Cross Reference: Union No. N451484-5710 Union No. N451484-5722	L&W A/N 1690-7XHS

HEXAGON
ALUMINUM/FIBERGLASS GATEARMS, COMPLETE

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
32' to 46' Aluminum/Fiberglass Gatearm complete with Wiring, 4" Gatearm Lamps, 2 Shear Pins, and Engineering Grade Reflex Reflective Stripes Cross Reference: Union No. N451484-5719 Union No. N451484-5731	L&W A/N 1691-XRS
32' to 46' Aluminum/Fiberglass Gatearm complete with Wiring, 4" Gatearm Lamps, 2 Shear Pins, and High Intensity Reflex Reflective Stripes Cross Reference: Union No. N451484-5720 Union No. N451484-5732	L&W A/N 1691-XHS
32' to 46' Aluminum/Fiberglass Gatearm complete with Wiring, 7" Gatearm Lamps, 2 Shear Pins, and Engineering Grade Reflex Reflective Stripes Cross Reference: Union No. N451484-5721 Union No. N451484-5733	L&W A/N 1691-7XRS
32' to 46' Aluminum/Fiberglass Gatearm complete with Wiring, 7' Gatearm Lamps, 2 Shear Pins, and High Intensity Reflex Reflective Stripes Cross Reference: Union No. N451484-5722 Union No. N451484-5734	L&W A/N 1691-7XHS

L&W industries, inc.

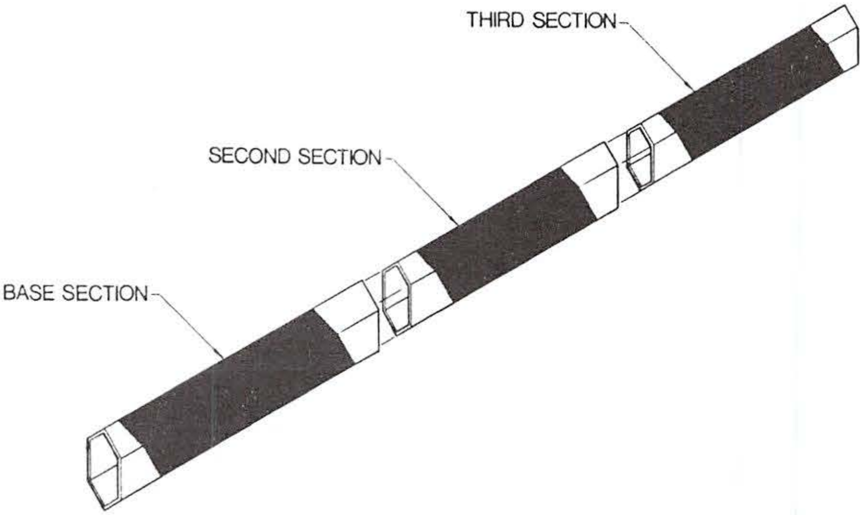
HEXAGON
ALUMINUM/FIBERGLASS GATEARMS, LESS LAMPS

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
16' to 32' Aluminum/Fiberglass Gatearm less Wiring and Lamps, with Engineering Grade Reflex Reflective Stripes Cross Reference: Union No. N451484-5711 Union No. N451484-5723	L&W A/N 1690-1XRS
16' to 32' Aluminum/Fiberglass Gatearm less Wiring and Lamps, with High Intensity Reflex Reflective Stripes Cross Reference: Union No. N451484-5712 Union No. N451484-5723	L&W A/N 1690-1XHS
32' to 46' Aluminum/Fiberglass Gatearm less Wiring and Lamps, with Engineering Grade Reflex Reflective Stripes Cross Reference: Union No. N451484-5723 Union No. N451484-5735	L&W A/N 1691-1XRS
32' to 46' Aluminum/Fiberglass Gatearm less Wiring and Lamps, with High Intensity Reflex Reflective Stripes Cross Reference: Union No. N451484-5724 Union No. N451484-5736	L&W A/N 1691-1XHS

L&W industries, inc.

HEXAGON
ALUMINUM/FIBERGLASS REPLACEMENT SECTIONS



TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
Base Section, 16', Aluminum, with Engineering Grade Reflex Reflective Stripes Cross Reference: Union No. N451071-3901 Union No. N451071-6203 Union No. N451071-4001	L&W P/N 1633-RS
Base Section, 16', Aluminum, with High Intensity Reflex Reflective Stripes Cross Reference: Union No. N451071-3904 Union No. N451071-6206 Union No. N451071-4002	L&W P/N 1633-HS

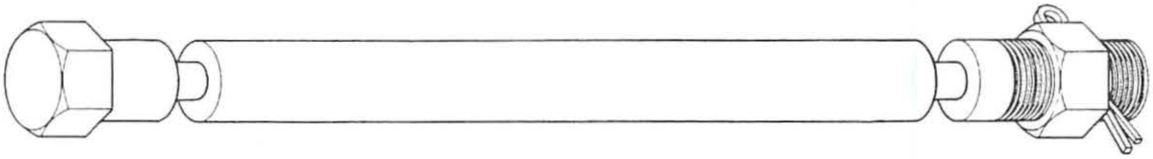
HEXAGON
ALUMINUM/FIBERGLASS REPLACEMENT SECTIONS

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Second Section, 16', Fiberglass, with Engineering Grade Reflex Reflective Stripes Cross Reference: Union No. N451484-5609 Union No. N451484-5613	L&W P/N 1634-RS
Second Section, 16', Fiberglass, with High Intensity Reflex Reflective Stripes Cross Reference: Union No. N451484-5610 Union No. N451484-5614	L&W P/N 1634-HS
Third Section, 16', Fiberglass, with Engineering Grade Reflex Reflective Stripes Cross Reference: Union No. N451484-5617 Union No. N451484-5621	L&W P/N 1638-RS
Third Section, 16', Fiberglass, With High Intensity Reflex Reflective Stripes Cross Reference: Union No. N451484-5618 Union No. N451484-5622	L&W P/N 1638-HS

L&W industries, inc.

SHEAR PINS



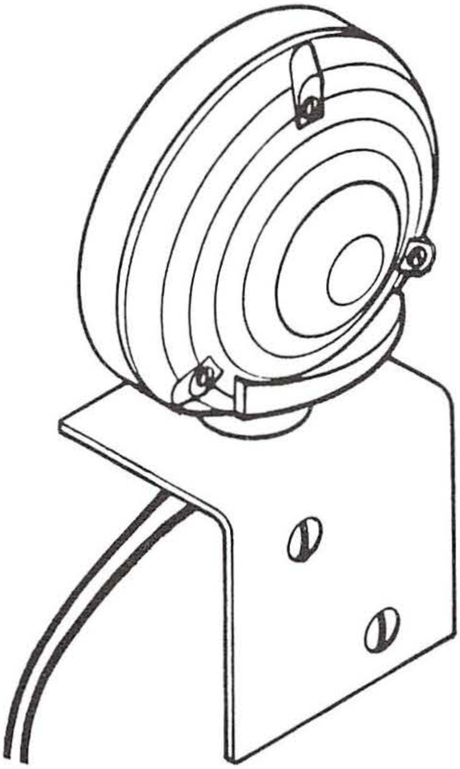
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Shear Pin for 16' to 32' Gatearm, complete with Nut and Cotter Pin Cross Reference: Union No. X451071-4709	L&W A/N 1571-X
Shear Pin for 32' to 46' Gatearm, complete with Nut and Cotter Pin Cross Reference: Union No. X451071-4710	L&W A/N 1572-X

L&W industries, inc.

L&W ECONOMY STYLE GATEARM LAMPS

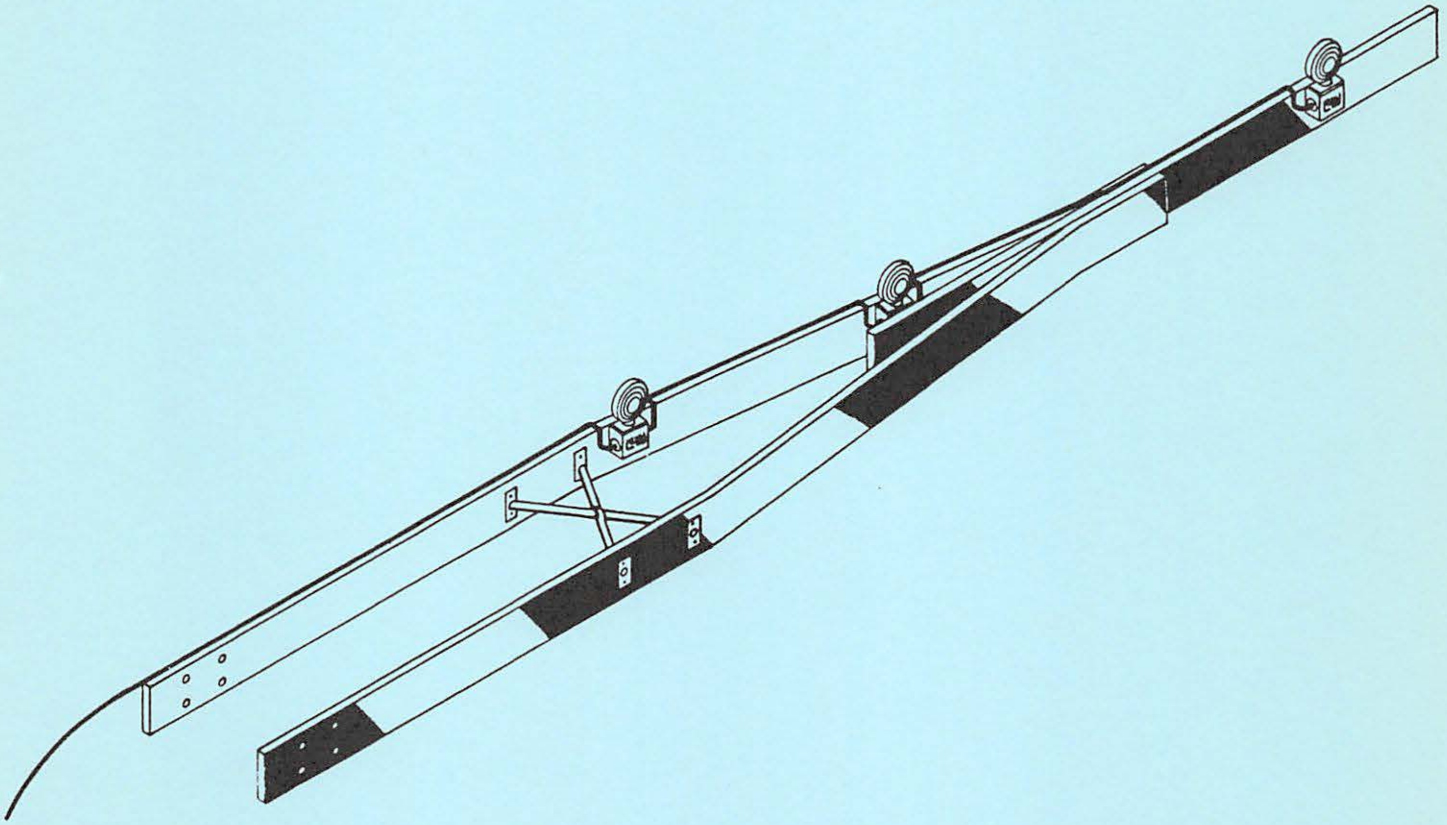
- ●Red Plastic Lens
- ●Economy "L" Bracket
- ●For replacement parts see catalog section 9-H



TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
4" Gatetarm Lamp complete with Mounting Bracket and plug Cross Reference: Union No. 451071-3801	L&W A/N 1035-X (without bulb) L&W A/N 1035-XB (with bulb)
7" Gatearm Lamp complete with Mounting Bracket and plug Cross Reference: Union No. 451484-5401	L&W A/N 1036-X (without bulb) L&W A/N 1036-XB (with bulb)

WOOD GATEARMS



JUNE, 1987

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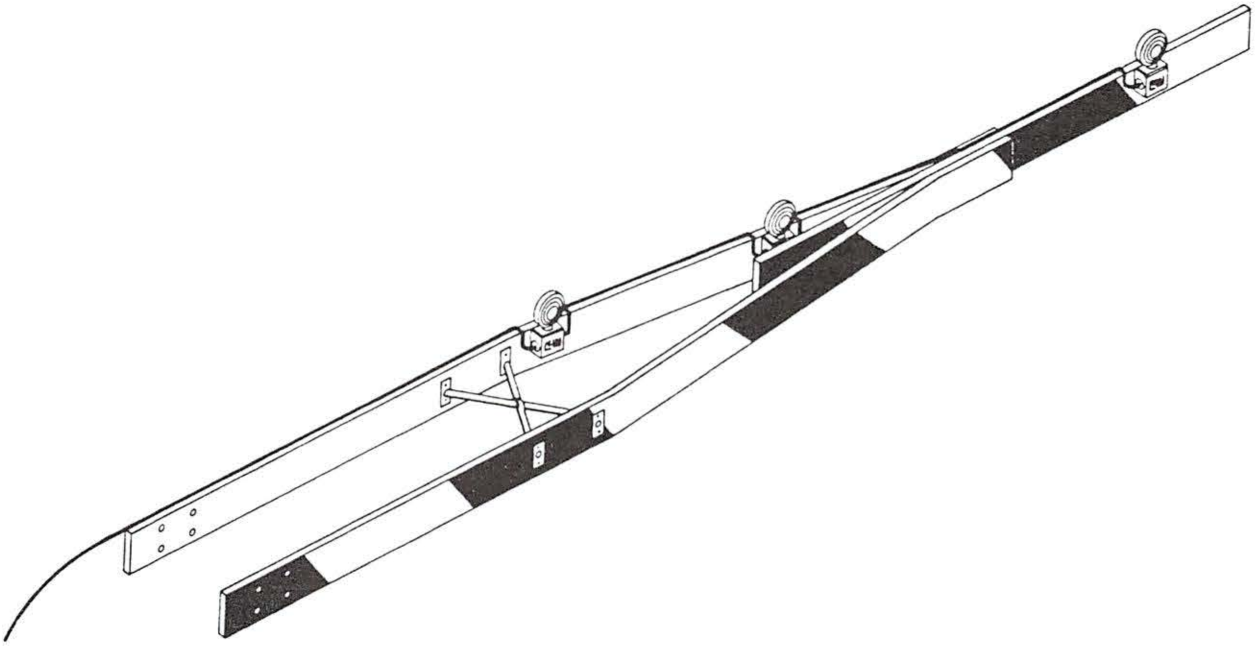
Springfield, MO 65802
417/864-5411

L&W industries, inc.

WOOD GATEARMS



L&W Wood Gatearms are available in lengths of 14 feet to 43 feet as measured from the center of the mast to the tip of the gatearm. All L&W Wood Gatearms are supplied with Reflex Reflective Red and White Stripes, three fully wired fixed Gatearm Lights with Terminal Boxes, and Mounting Hardware, ready for installation.

3149 E. Chestnut Expressway
Springfield, MO 65802
417/864-5411

WOOD GATEARMS

TO ORDER: Specify description, ordering reference, and diameter of Gatearms Lamp desired (4 in. or 7 in.). Refer to pages 9-G-4 and 9-G-5 for Gatearm Lamp ordering information.

DESCRIPTION	ORDERING REFERENCE
14 ft. to 18 ft. Wood Gatearm with Engineering Grade Reflex Reflective Stripes	L&W A/N 1500-XRS (without Lamps and Wiring) L&W A/N 1520-XRS (with Lamps and Wiring)
14 ft. to 18 ft. Wood Gatearm with High Intensity Reflex Reflective Stripes	L&W A/N 1500-XHS (without Lamps and Wiring) L&W A/N 1520-XHS (with Lamps and Wiring)
19 ft. to 24 ft. Wood Gatearm with Engineering Grade Reflex Reflective Stripes	L&W A/N 1503-XRS (without Lamps and Wiring) L&W A/N 1523-XRS (with Lamps and Wiring)
19 ft. to 24 ft. Wood Gatearm with High Intensity Reflex Reflective Stripes	L&W A/N 1503-XHS (without Lamps and Wiring) L&W A/N 1523-XHS (With Lamps and Wiring)
25 ft. to 30 ft. Wood Gatearm with Engineering Grade Reflex Reflective Stripes	L&W A/N 1505-XRS (without Lamps and Wiring) L&W A/N 1525-XRS (with Lamps and Wiring)
25 ft. to 30 ft. Wood Gatearm with High Intensity Reflex Reflective Stripes	L&W A/N 1505-XHS (without Lamps and Wiring) L&W A/N 1525-XHS (with Lamps and Wiring)

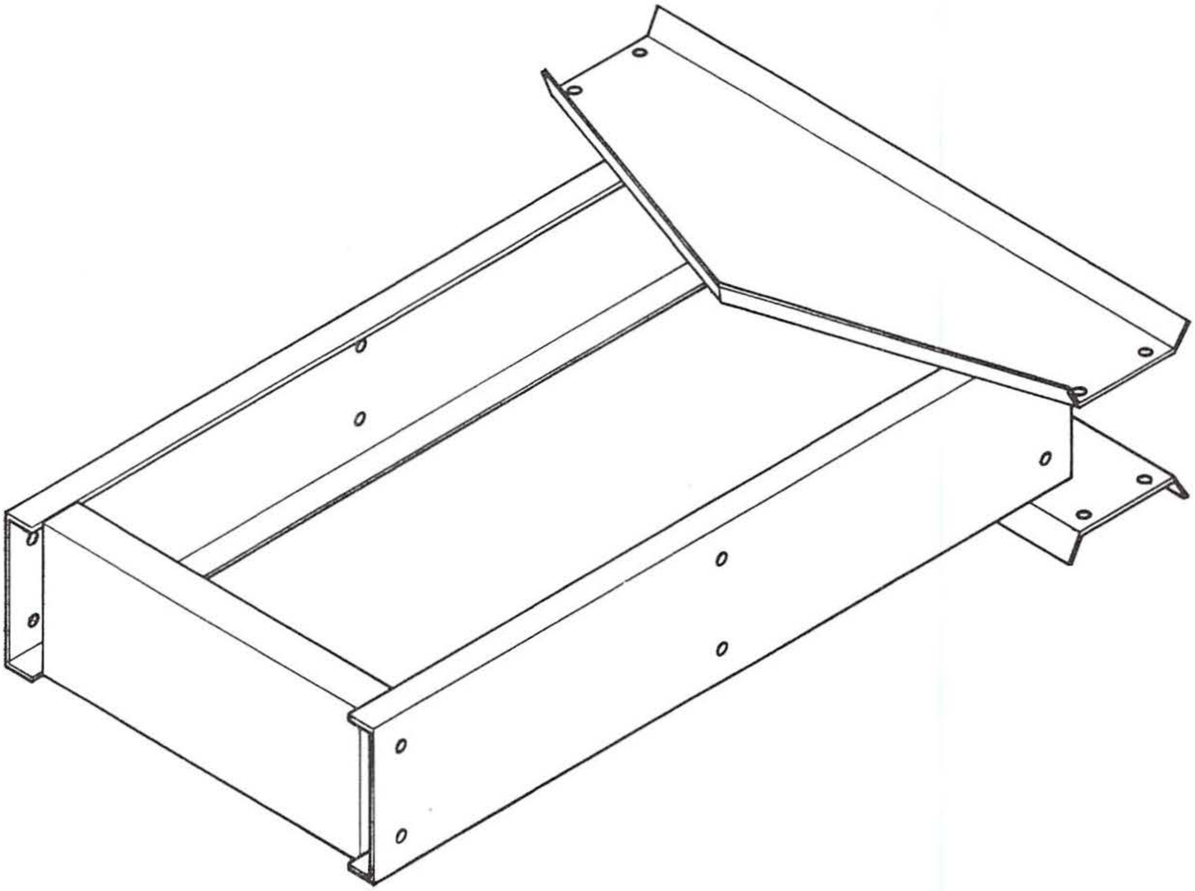
WOOD GATEARMS

TO ORDER: Specify description, ordering reference, and diameter of Gatearm Lamp desired (4 in. or 7 in.). Refer to pages 9-G-4 and 9-G-5 for Gatearm Lamp ordering information.

DESCRIPTION	ORDERING REFERENCE
30 ft. to 35 ft. Wood Gatearm with Engineering Grade Reflex Reflective Stripes	L&W A/N 1506-XRS (without Lamps and Wiring) L&W A/N 1526-XRS (with Lamps and Wiring)
30 ft. to 35 ft. Wood Gatearm with High Intensity Reflex Reflective Stripes	L&W A/N 1506-XHS (without Lamps and Wiring) L&W A/N 1526-XHS (with Lamps and Wiring)
36 ft. to 39 ft. Wood Gatearm with Engineering Grade Reflex Reflective Stripes	L&W A/N 1507-XRS (without Lamps and Wiring) L&W A/N 1527-XRS (with Lamps and Wiring)
36 ft. to 39 ft. Wood Gatearm with High Intensity Reflex Reflective Stripes and	L&W A/N 1507-XHS (without Lamps and Wiring) L&W A/N 1527-XHS (with Lamps and Wiring)
40 ft. to 43 ft. Wood Gatearm with Engineering Grade Reflex Reflective Stripes	L&W A/N 1511-XRS (without Lamps and Wiring) L&W A/N 1521-XRS (with Lamps and Wiring)
40 ft. to 43 ft. Wood Gatearm with High Intensity Reflex Reflective Stripes	L&W A/N 1511-XHS (without Lamps and Wiring) L&W A/N 1521-XHS (with Lamps and Wiring)

WOOD GATEARM SUPPORT

L&W Wood Gatearm Supports are designed to mount Wood Gatearms to all Mast Mount Mechanisms.



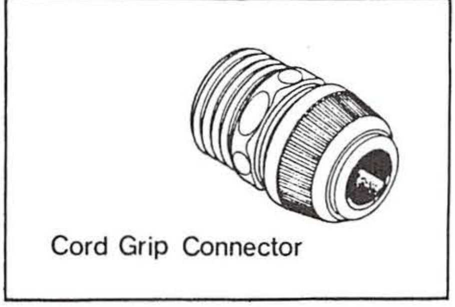
TO ORDER: Specify description and ordering reference.

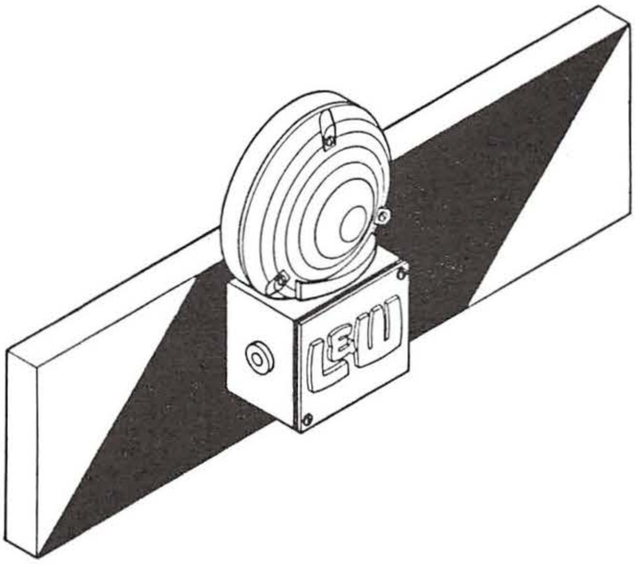
DESCRIPTION	ORDERING REFERENCE
Wood Gatearm Support for Gatearm lengths up to 38 ft.	L&W P/N 1830
Wood Gatearm Support for Gatearm lengths 39 ft. and longer	L&W P/N 1831

L&W industries, inc.

L&W 4 INCH RIGID GATEARM LAMPS

- ●Red Plastic Lens
- ●Aluminum weatherproof box
- ●For replacement parts see catalog section 9-H


Cord Grip Connector



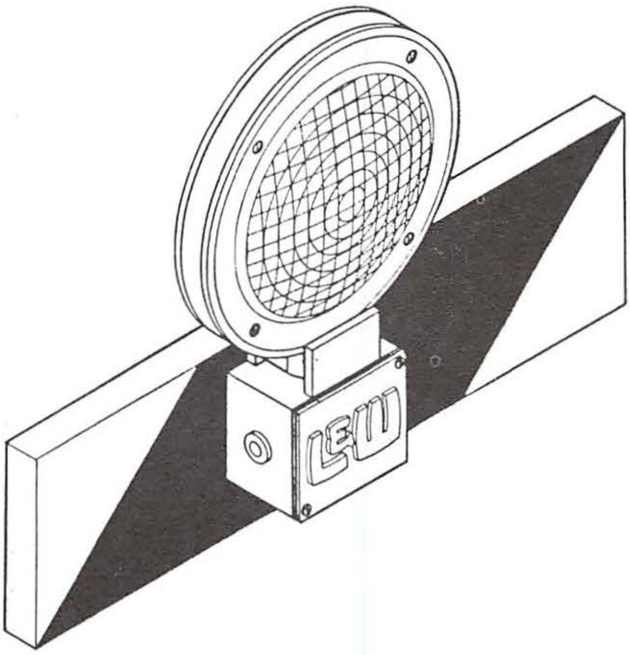
TO ORDER: Specify description and ordering reference.

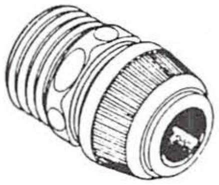
DESCRIPTION	ORDERING REFERENCE
4 inch Rigid Gatearm Lamp with Terminal Box and Rubber Grommets Standard Package: 3 per box Cross Reference: W-C-H No. 1591 Safetran No. 075950-500X	L&W A/N 1017-X (without bulb) L&W A/N 1017-XB (with bulb)
4 inch Rigid Gatearm Lamp with Terminal Box and Cord Grip Connectors Standard Package: 3 per box Cross Reference: NEG No. 2018	L&W A/N 1018-X (without bulb) L&W A/N 1018-XB (with bulb)

L&W industries, inc.

L&W 7 INCH RIGID GATEARM LAMPS

- Red Plastic Lens
- Aluminum weatherproof box with Anti-Vandal guards
- For replacement parts see catalog section 9-H





Cord Grip Connector

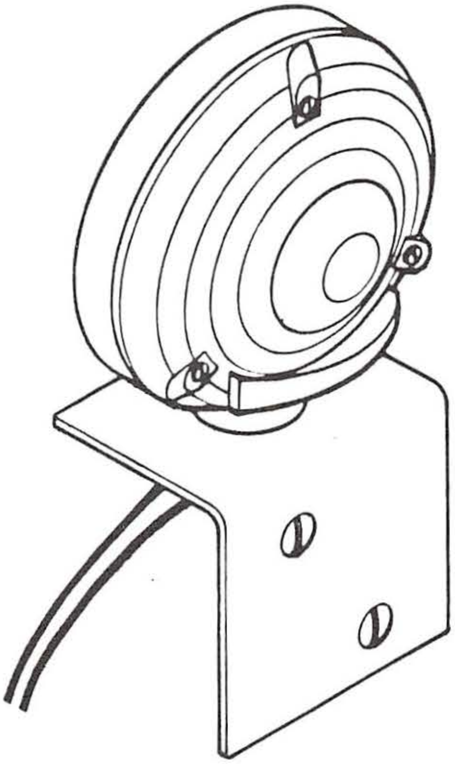
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
7 inch Rigid Gatearm Lamp with Terminal Box and Rubber Grommets Standard Package: 3 per box Cross Reference: W-C-H No. 1592 Safetran No. 075950-502X	L&W A/N 1024-X (without bulb) L&W A/N 1024-XB (with bulb)
7 inch Rigid Gatearm Lamp with Terminal Box and Cord Grip Connectors Standard Package: 3 per box Cross Reference: NEG No. 1018	L&W A/N 1020-X (without bulb) L&W A/N 1020-XB (with bulb)

L&W industries, inc.

L&W ECONOMY STYLE GATEARM LAMPS

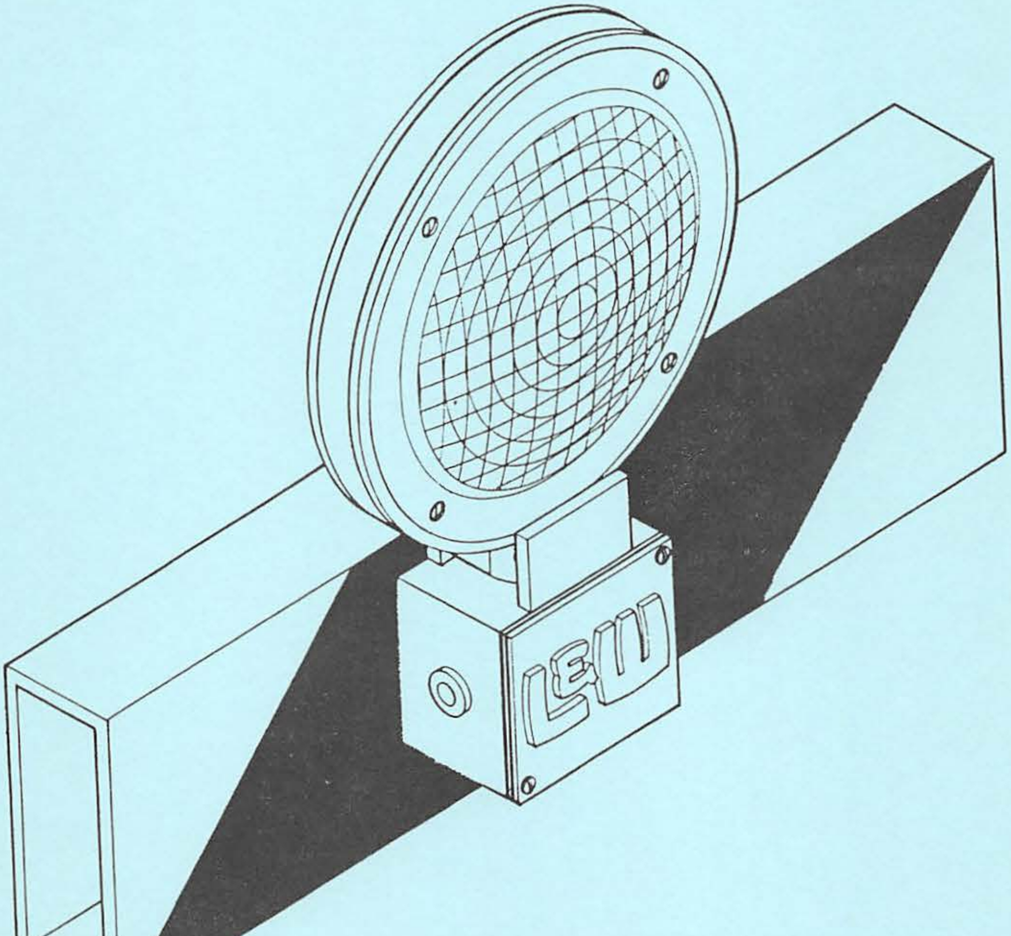
- ●Red Plastic Lens
- ●Economy "L" Bracket
- ●For replacement parts see catalog section 9-H



TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
4 inch Lamp complete with mounting bracket Standard package: 3 per box Cross Reference: Union No. 451071-3801	L&W A/N 1035-X (without bulb) L&W A/N 1035-XB (with bulb)
7 inch Lamp complete with mounting bracket Standard package: 3 per box Cross Reference: Union No. 451484-5401	L&W A/N 1036-X (without bulb) L&W A/N 1036-XB (with bulb)

GATEARM LAMPS



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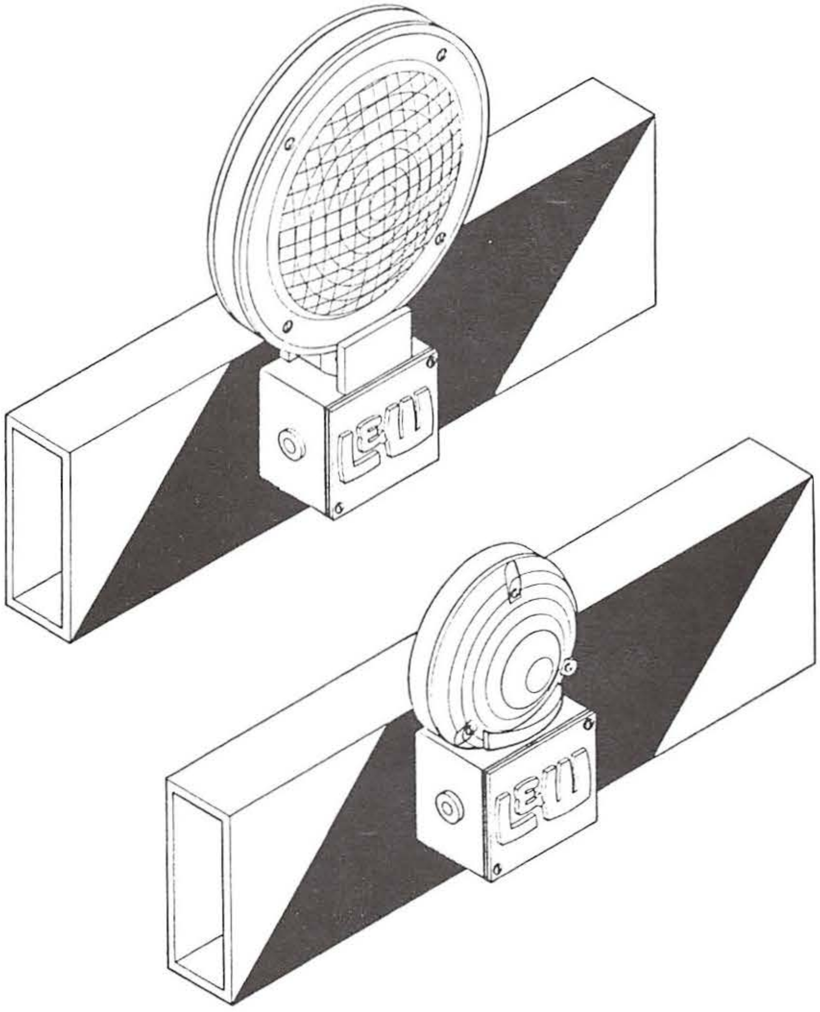
417/864-5411

APRIL, 1987

L&W industries, inc.

GATEARM LAMPS



L&W 4" and 7" Gatearm Lamps are molded from red Polycarbonate. This provides 360 degree visibility along with being lightweight and durable. When required a sturdy Cast Aluminum Box is provided for wire termination.

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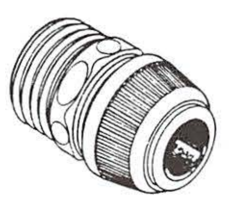
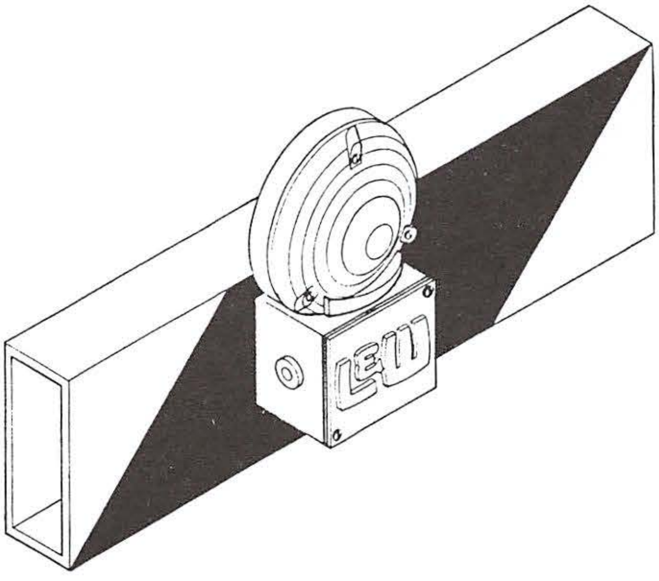
L&W 4 INCH RIGID GATEARM LAMPS

- Red Plastic Lens
- Aluminum weatherproof box
  See page 9-H-8
- Mounts on Wood, Fiberglass. or Aluminum Gatearms
- Used on L&W AF1, FF1, and Wood Gatearms



Cord Grip Connector



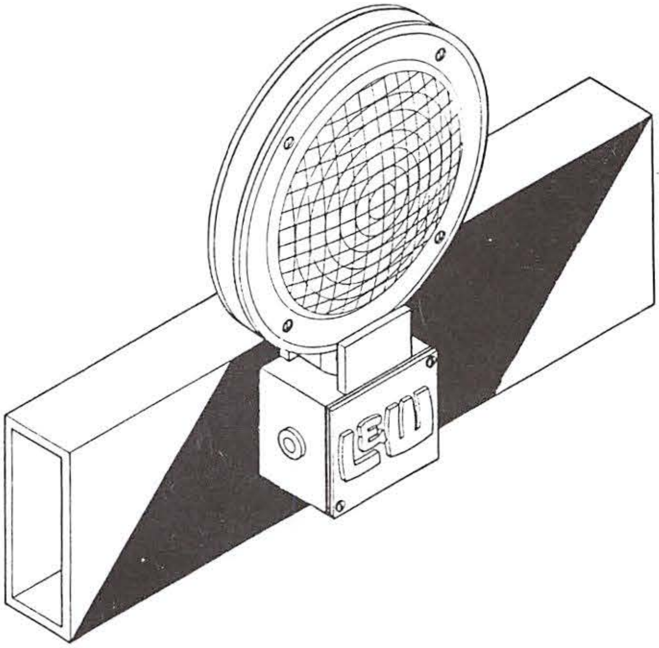
TO ORDER: Specify description and ordering reference.

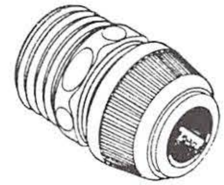
DESCRIPTION	ORDERING REFERENCE
4 inch Rigid Gatearm Lamp with Terminal Box and Rubber Grommets Standard Package: 3 per box Cross Reference: W-C-H No. 1591 Safetran No. 075950-500X	L&W A/N 1017-X (without bulb) L&W A/N 1017-XB (with bulb)
4 inch Rigid Gatearm Lamp with Terminal Box and Cord Grip Connectors Standard Package: 3 per box Cross Reference: NEG No. 2018	L&W A/N 1018-X (without bulb) L&W A/N 1018-XB (with bulb)

L&W industries, inc.

L&W 7 INCH RIGID GATEARM LAMPS

- Red Plastic Lens
- Aluminum weatherproof box with Anti-Vandal guards See page 9-H-8
- Mounts on Wood, Fiberglass, or Aluminum Gatearms
- Used on L&W AF1, FF1, and Wood Gatearms




Cord Grip Connector

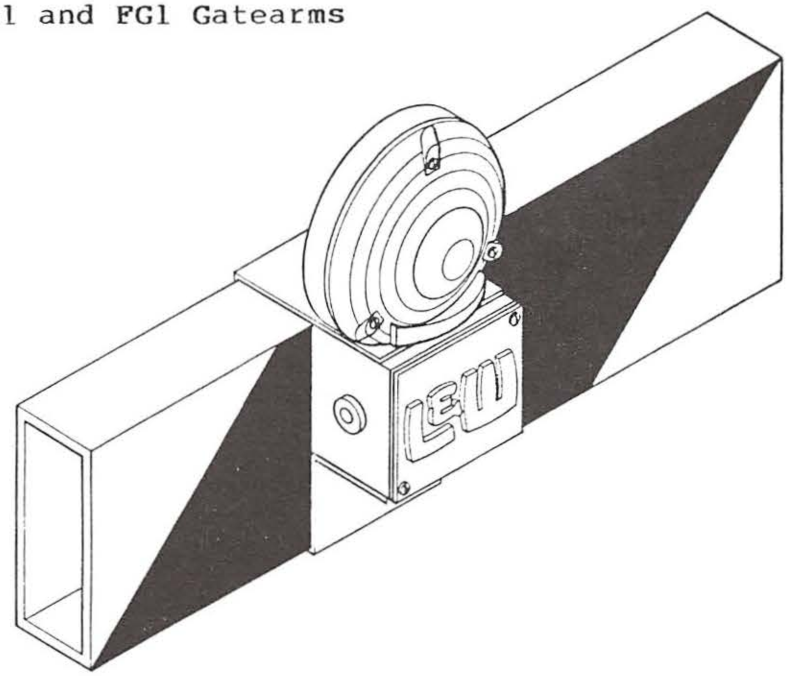
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
7 inch Rigid Gatearm Lamp with Terminal Box and Rubber Grommets Standard Package: 3 per box Cross Reference: W-C-H No. 1592 Safetran No. 075950-502X	L&W A/N 1024-X (without bulb) L&W A/N 1024-XB (with bulb)
7 inch Rigid Gatearm Lamp with Terminal Box and Cord Grip Connectors Standard Package: 3 per box Cross Reference: NEG No. 1018	L&W A/N 1020-X (without bulb) L&W A/N 1020-XB (with bulb)

L&W industries, inc.

L&W 4 INCH ADJUSTABLE GATEARM LAMPS

- ●Red Plastic Lens
- ●Aluminum weatherproof box
  See page 9-H-8
- ●Mounting Bracket
- ●Used on L&W AG1 and FG1 Gatearms



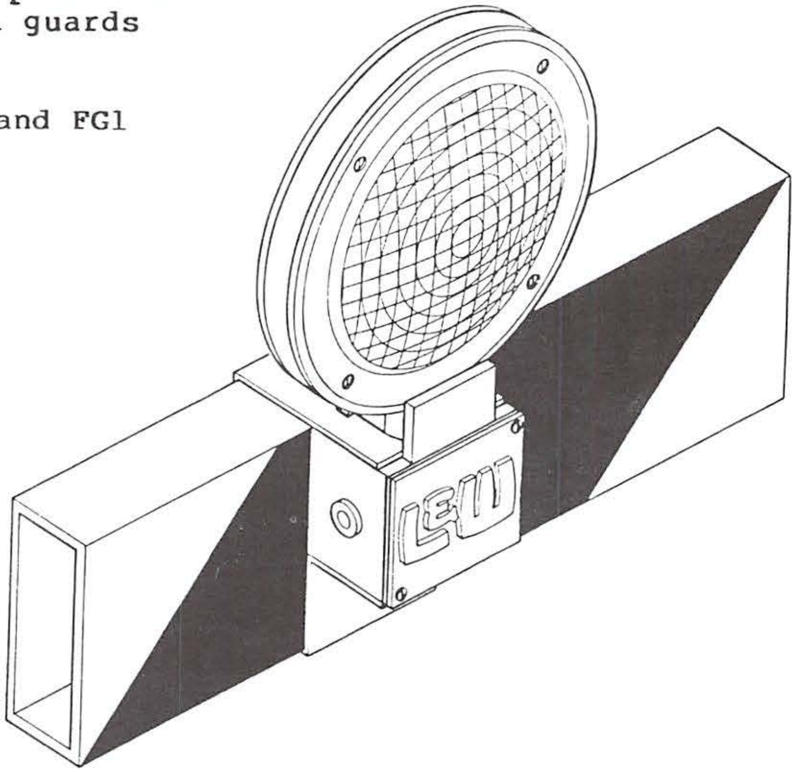
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
4 inch Adjustable Gatearm Lamp with Terminal Box and Rubber Grommets Standard package: 3 per box	L&W A/N 1030-X (without bulb) L&W A/N 1030-XB (with bulb)

L&W industries, inc.

L&W 7 INCH ADJUSTABLE GATEARM LAMPS

- Red Plastic Lens
- Aluminum weatherproof box with Anti-Vandal guards See page 9-H-8
- Mounting Bracket
- Used on L&W AG1 and FG1 Gatearms



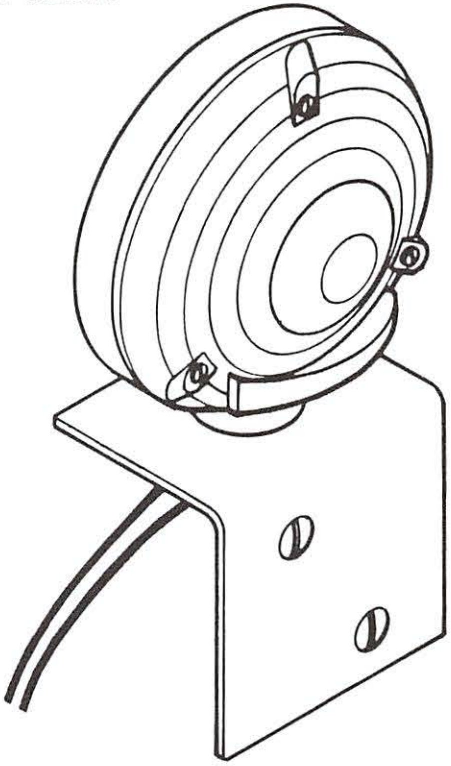
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
7 inch Adjustable Gatearm Lamp with Terminal Box and Rubber Grommets Standard package: 3 per box	L&W A/N 1031-X (without bulb) L&W A/N 1031-XB (with bulb)

L&W industries, inc.

L&W ECONOMY STYLE GATEARM LAMPS

- Red Plastic Lens
- Mounts to US&S Aluminum Gatearms
- Economy "L" Bracket
- Used on L&W Hexagon Gatearms



TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
4 inch Lamp complete with mounting bracket Standard package: 3 per box Cross Reference: Union No. 451071-3801	L&W A/N 1035-X (without bulb) L&W A/N 1035-XB (with bulb)
7 inch Lamp complete with mounting bracket Standard package: 3 per box Cross Reference: Union No. 451484-5401	L&W A/N 1036-X (without bulb) L&W A/N 1036-XB (with bulb)

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L&W industries, inc.

GATEARM LAMP REPLACEMENT PARTS

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
4 in. Lamp complete with lenses and mounting hardware Cross Reference: NEG No. 214 Safetran No. 075952-500X	L&W A/N 1019-X (without bulb) L&W A/N 1019-XB (with bulb)
4 in. Lens Kit complete with gaskets, screws, and 2 lenses	L&W A/N 1026-X
4 in. Mounting Ring	L&W P/N 1019
7 in Lamp complete with lenses and mounting hardware Cross Reference: Safetran No. 075952-509X	L&W A/N 1003-X (without bulb) L&W A/N 1003-XB (with bulb)
7 in. Lens Kit complete with screws and 2 lenses	L&W A/N 1002-X
7 in. Mounting Ring Cross Reference: NEG No. 216	L&W P/N 1003

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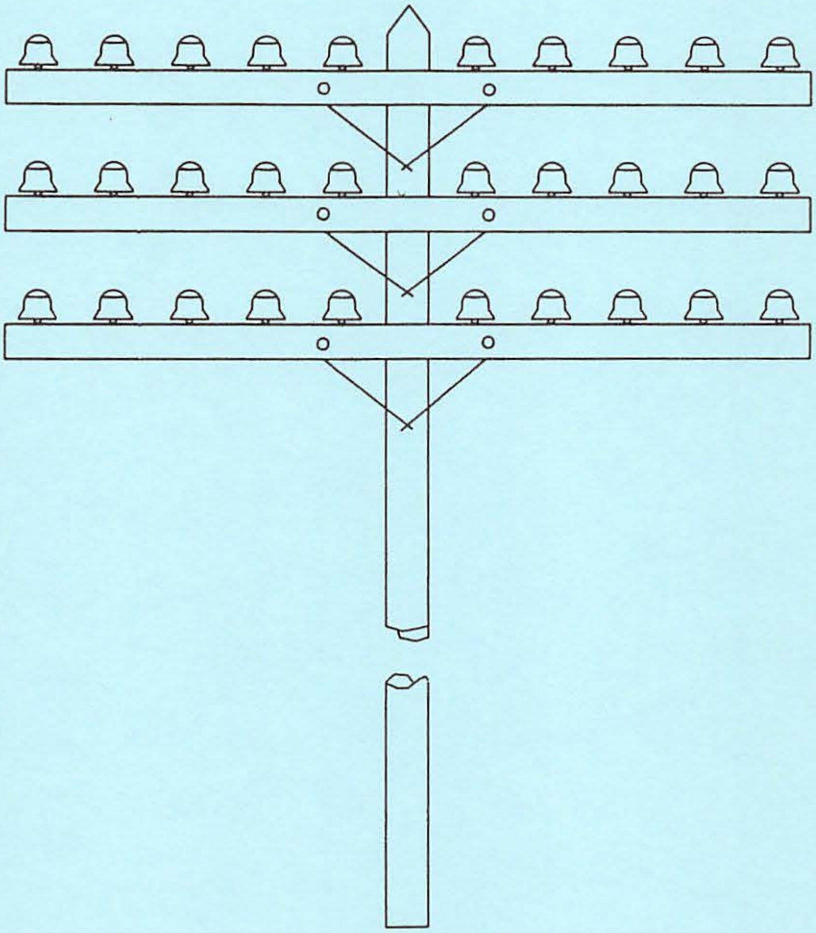
POLE LINE MATERIAL



FEB, 1988

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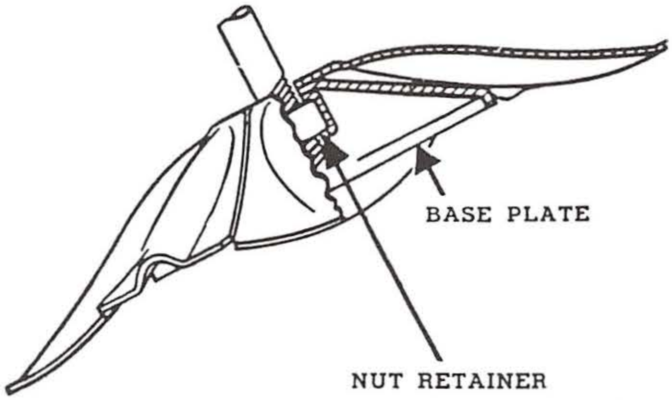
8-WAY EXPANDING ANCHOR

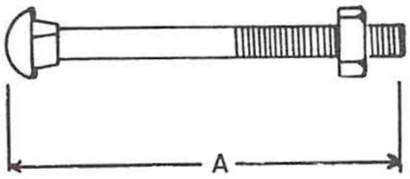


- NUT RETAINER AIDS IN INSTALLATION
- 115 SQUARE INCH LOAD SURFACE

TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
3/4" 8-Way Expanding Anchor with nut retainer.	L&W P/N 88135

CARRIAGE BOLTS

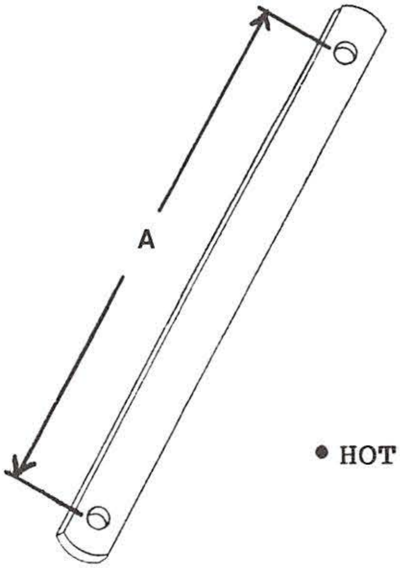


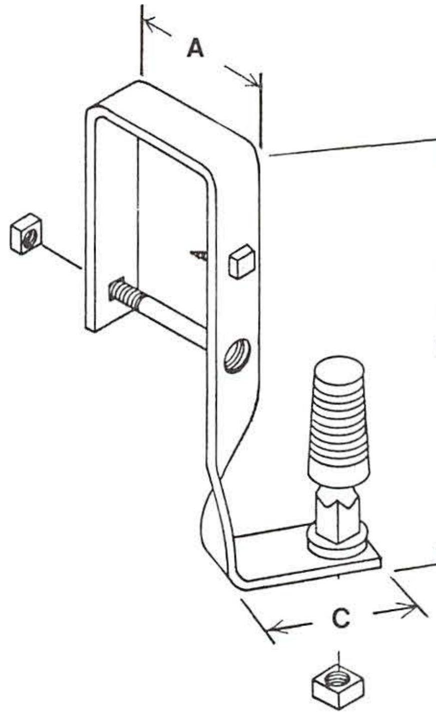
- OPEN HEARTH STEEL
- HOT GALVANIZED

TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
3/8" Carriage Bolts have square nuts, finished points and rolled threads. A=4"	L&W P/N 18634
3/8" Carriage Bolts have square nuts, finished points and rolled threads. A=6"	L&W P/N 18646

BRACES & BRACKETS





- HOT DIP GALVANIZED

TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
26" Flat Crossarm Brace 1/4" x 1-1/4" A= 26"	L&W P/N 17126
28" Flat Crossarm Brace 1/4" x 1-1/4" A= 28"	L&W P/N 17128
30" Flat Crossarm Brace 1/4" x 1-1/4" A= 30"	L&W P/N 17130
Transposition Bracket with 1/2"X 4-1/2" carriage bolt A=3-1/4" B=10-1/2" C=4-1/8"	L&W P/N 18251-X

GUY & LASHING WIRE CLAMPS

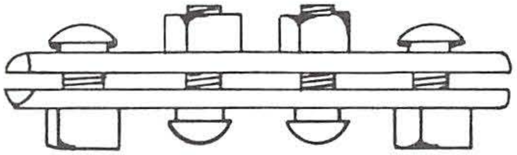


FIG.1

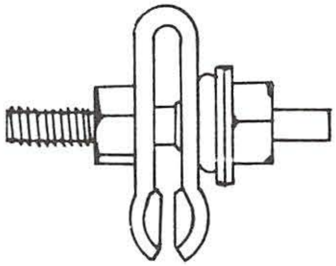


FIG.3

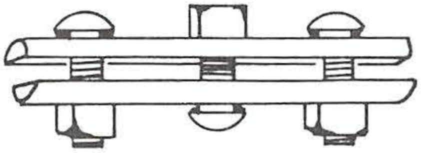


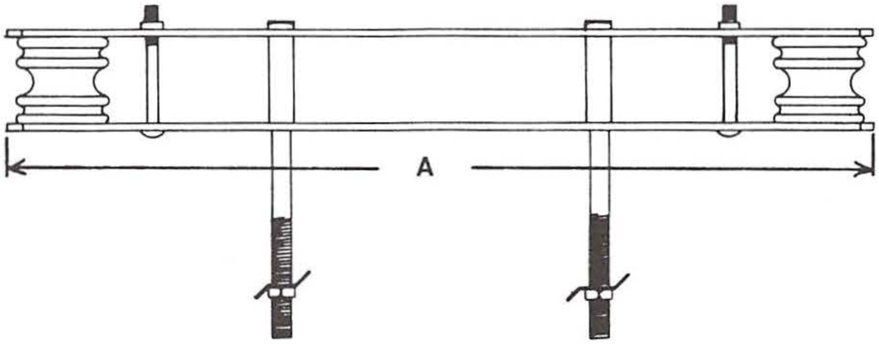
FIG.2

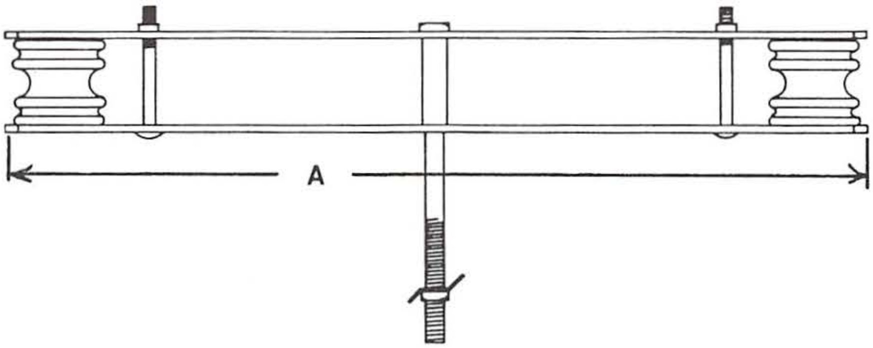
- HOT DIP GALVANIZED

TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
5/8" Guy Clamp with parallel grooves and shoulder in figure 1.	L&W P/N 6461
1/2" Guy Clamp with parallel grooves and shoulder in figure 2.	L&W P/N 6450
1" Lashing Wire Clamp in figure 3.	L&W P/N 9000

BREAKARMS

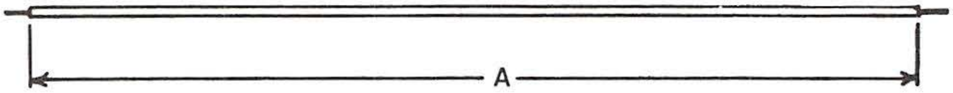




TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
McKeen Breakarm with 7"-12" bolt spacing with two 1/2-13x7" machine bolts with square nuts. A=22"	L&W P/N 15016-X
McKeen Breakarm with 7"-12" bolt spacing with one 1/2-13x7" machine bolt with a sqare nut. A=22"	L&W P/N 15019-X

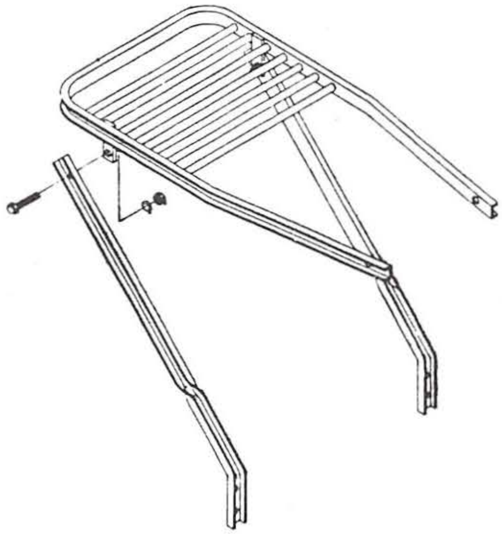
TIE WIRES



TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
#10 AWG Wire Tie, 30% hard copper,2/64" insulation. A=26"	L&W P/N 6460

POLE SEATS

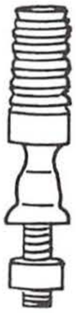


- MADE OF CHANNEL STEEL
- WILL SUPPORT OVER 1500 POUNDS
- HOT DIP GALVANIZED

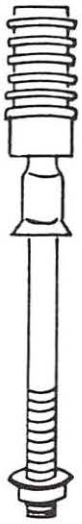
TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
Pole Seats 1"X 1/2"X 1/8" channel steel size	L&W P/N 16550-X

COMMUNICATION PINS



- SHORT SHANK FOR METAL CROSSARMS
- HIGH CARBON STEEL
- HOT DIP GALVANIZED

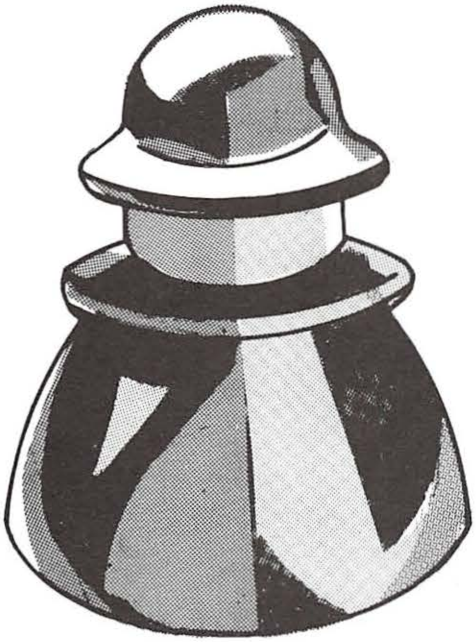


- LONG SHANK FOR WOOD CROSSARMS
- HIGH CARBON STEEL
- HOT DIP GALVANIZED

TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
Communication Pin for metal crossarms for use with standard 1" pin type insulators	L&W P/N 17010-X
Communication Pin for wood crossarms for use with standard 1" pin type insulators	L&W P/N 17000-X
Wood Cob Only	L&W P/N 17003

1800 INSULATOR



- **UNBREAKABLE AND SHATTER PROOF BY SMALL ARMS OR RIFLE FIRE**
- **HIGH IMPACT**
- **RADIO FREE**
- **SUPERIOR TO GLASS OR PORCELAIN**
- **4100 LB/IN2 TENSILE STRENGTH**
- **500 MEGOHMS LEAKAGE RESISTANCE**
- **40,000 FLASH-OVER VOLTAGE**
- **550 VOLTS/MIL DIELECTRIC STRENGTH**

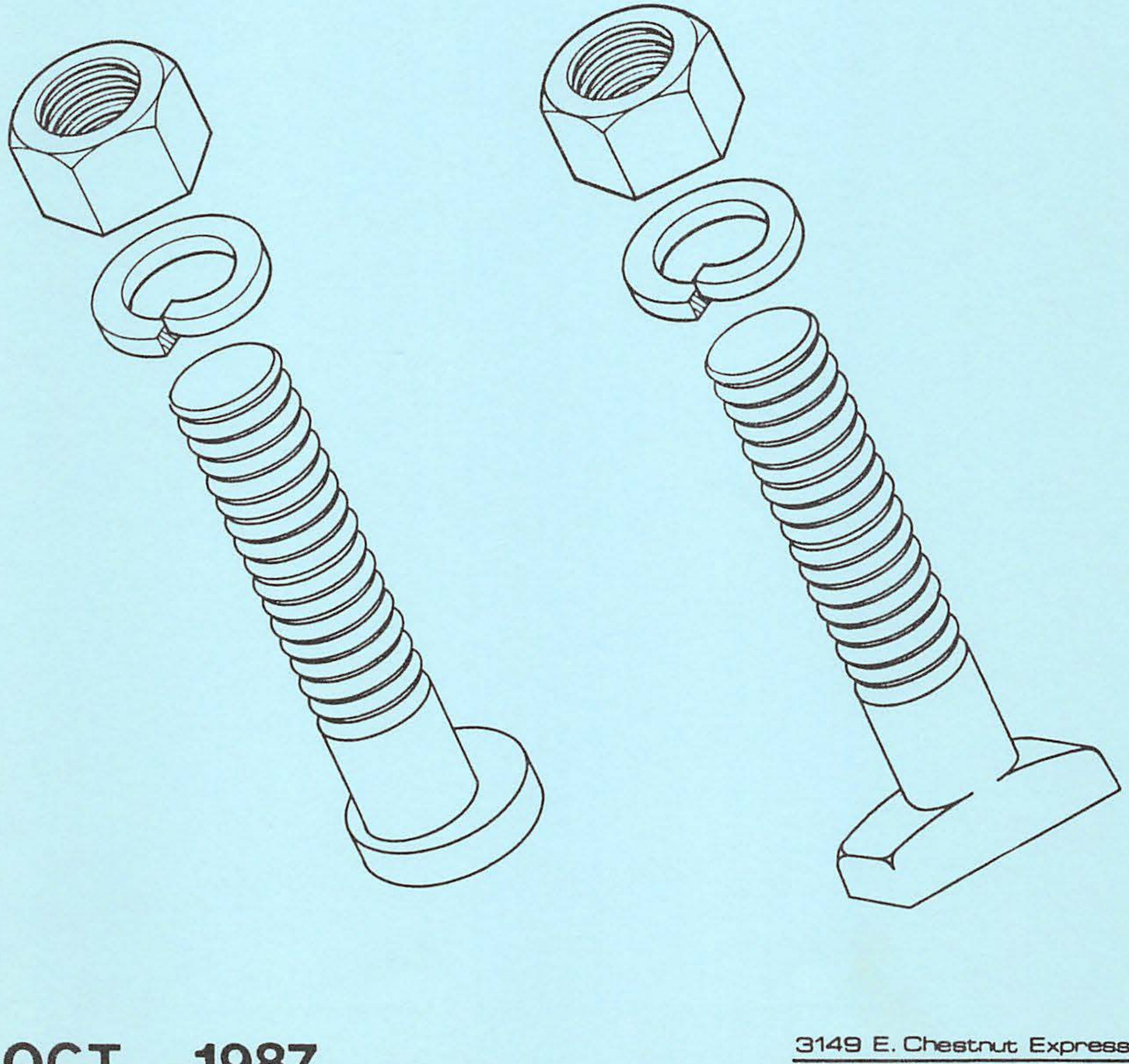
TO ORDER: Specify description and ordering reference

DESCRIPTION	ORDERING REFERENCE
4 Inch Insulator **1" pin hole size. Outside skirt dia.= 3-1/2". Groove dia.= 1-5/8"**	**L&W P/N 1800**

L&W industries, inc. 11-D

RETARDER

BRAKE SHOE BOLTS



OCT, 1987

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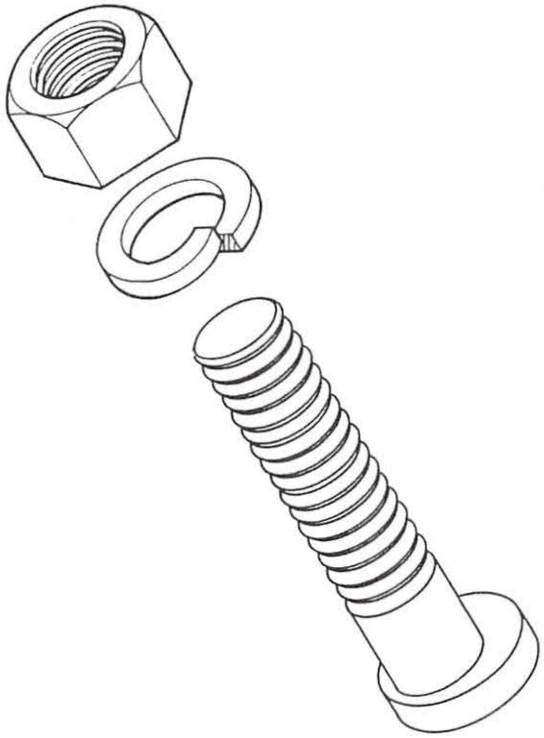
ELECTROPNEUMATIC RETARDER
BRAKE SHOE BOLTS



• GRADE 8 STEEL

TO ORDER: Specify description and ordering reference

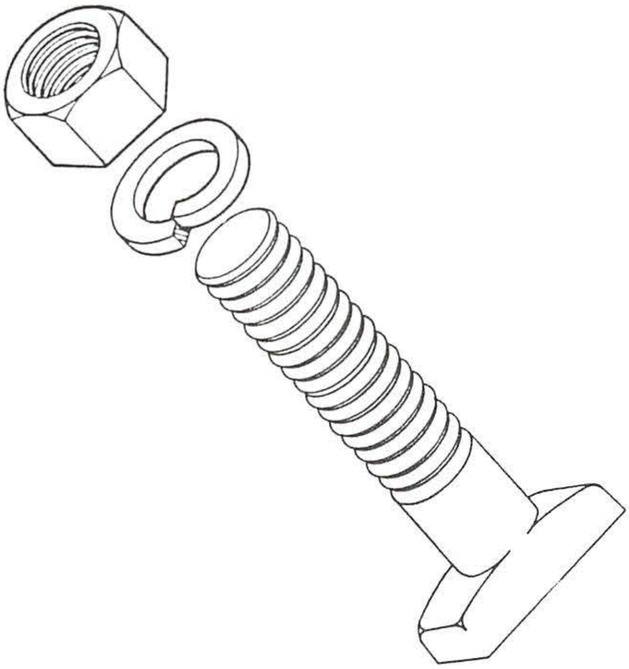
DESCRIPTION	ORDERING REFERENCE
Bolt, Brake Shoe, for Electropneumatic Retarder, 7/8"x3-1/4" complete with Nut and Lock Washer. CROSS REFERENCE: AAA G6311	L&W P/N 8850-X
Bolt, Brake Shoe for Electropneumatic Retarder, 7/8"x3-3/4 complete with Nut and Lock Washer. CROSS REFERENCE: AAA G6317	L&W P/N 8852-X

L&W industries, inc.

ELECTROPNEUMATIC RETARDER
BRAKE SHOE BOLTS

DESCRIPTION	ORDERING REFERENCE
Bolt, Brake Shoe for Electropneumatic Retarder, 7/8"x4" complete with Nut and Lock Washer. CROSS REFERENCE: AAA G6325	L&W P/N 8854-X
Bolt, Brake Shoe, Only, For Electropneumatic Retarder, 7/8"x3-1/4" CROSS REFERENCE: AAA 6313	L&W P/N 8850
Bolt, Brake Shoe, Only For Electropneumatic Retarder, 7/8"x 3-3/4" CROSS REFERENCE: AAA 6317	L&W P/N 8852
Bolt, Brake Shoe, Only, For Electropneumatic Retarder, 7/8"x 4" CROSS REFERENCE: UNION J466075-0101 AAA 6325	L&W P/N 8854
Nut, Hex, For Electropneumatic Brake Shoe Bolt. CROSS REFERENCE: AAA 1140	L&W P/N 9445
Lock Washer For Electropneumatic Brake Shoe Bolt. CROSS REFERENCE: AAA 1255	L&W P/N 9520

TEE-HEAD
ELECTRIC RETARDER
BRAKE SHOE BOLTS



- GRADE 8 STEEL
- ZINC DICHROMATE PLATED

TO ORDER: Specify description and ordering reference

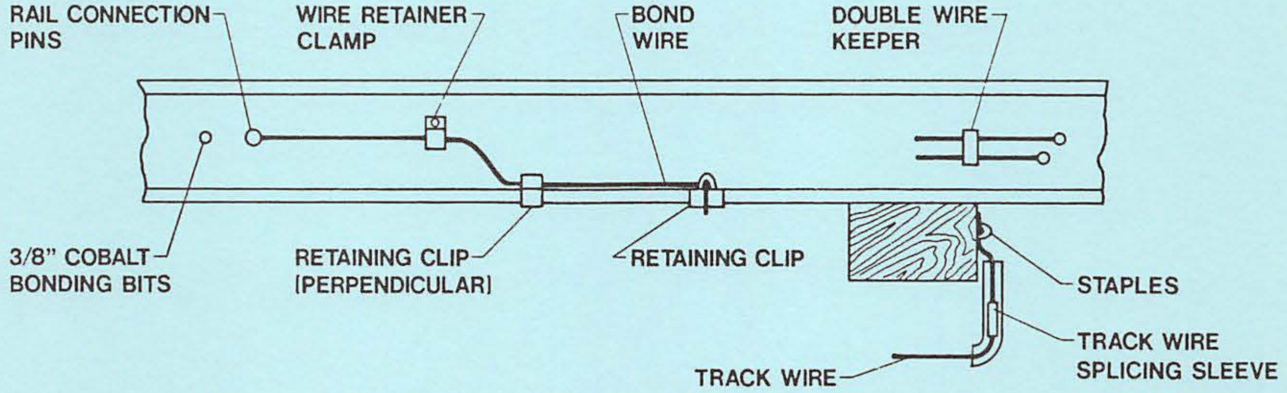
DESCRIPTION	ORDERING REFERENCE
Bolt, Brake Shoe, Tee-Head, For Electromechanical Retarder, 1"X3", complete with nut and lock washer	L&W P/N 8800-X
For fine threaded bolt	L&W P/N 8800-1X
Bolt, Brake Shoe, Tee-Head, For Electromechanical Retarder	L&W P/N 8800
Nut Hex, For Electromechanical Retarder	L&W P/N 8802
For fine threaded nut	L&W P/N 8804
Lock Washer, For Electromechanical Retarder	L&W P/N 8803

L&W INDS., INC.

FOR ADDITIONAL INFORMATION CONTACT:

L & W INDS., INC.
3149 E. CHESTNUT EXPWAY.
SPRINGFIELD, MO 65802
(417) 864-5411

TRACK CIRCUIT MATERIAL


RAIL CONNECTION PINS
WIRE RETAINER CLAMP
BOND WIRE
DOUBLE WIRE KEEPER
3/8" COBALT BONDING BITS
RETAINING CLIP (PERPENDICULAR)
RETAINING CLIP
STAPLES
TRACK WIRE SPLICING SLEEVE
TRACK WIRE

MAY, 1987

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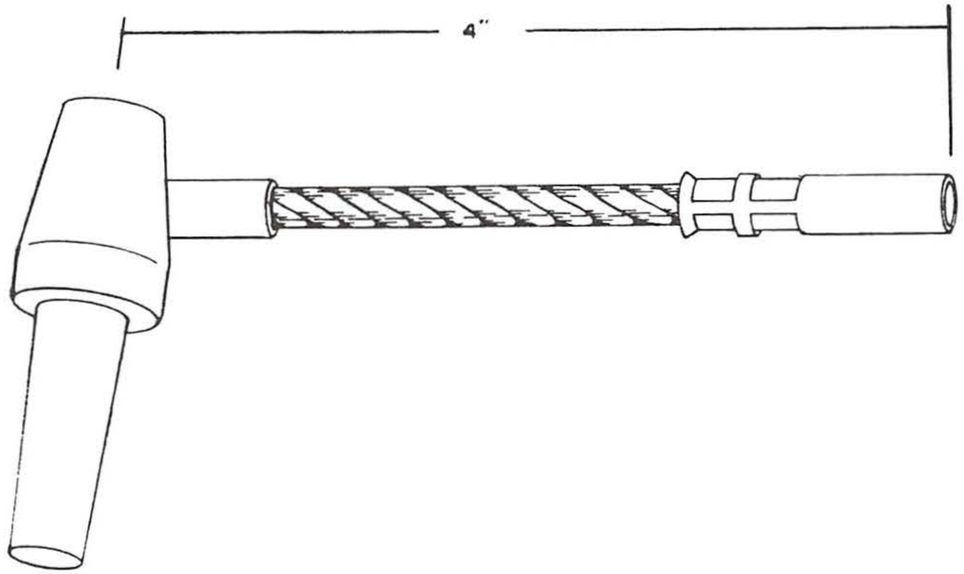
L&W industries, inc.

TRACK CONNECTOR

The Track Connector will allow Bondstrand to be mechanically and electrically connected to the rail. The tapered pin bonds tightly into a 3/8" hole drilled into the web of the rail. The Track Connector can be connected to a Bondstrand wire by crimping the crimp connector sleeve with a Type 31-DJ crimping tool. See page 12-A-13 for details of the Type 31-DJ crimping tool.



ORDERING INFORMATION

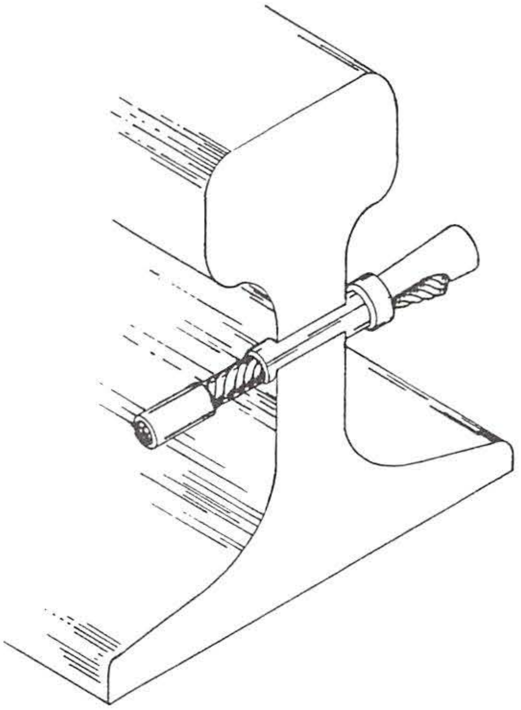
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Track Connector, 3/8" rail hole with 2 1/2" Bondstrand and Crimp Sleeve Connector	L&W P/N 1700

L&W industries, inc.

DOUBLE-ENTRY STRANPIN

The Double-Entry Stranpin will allow Bondstrand to be mechanically and electrically connected to the rail. Installation is accomplished by inserting the sleeve into a 3/8" hole in the web of the rail, inserting the Bondstrand through the sleeve, and locking it into position by hammering the retaining pin into the sleeve.



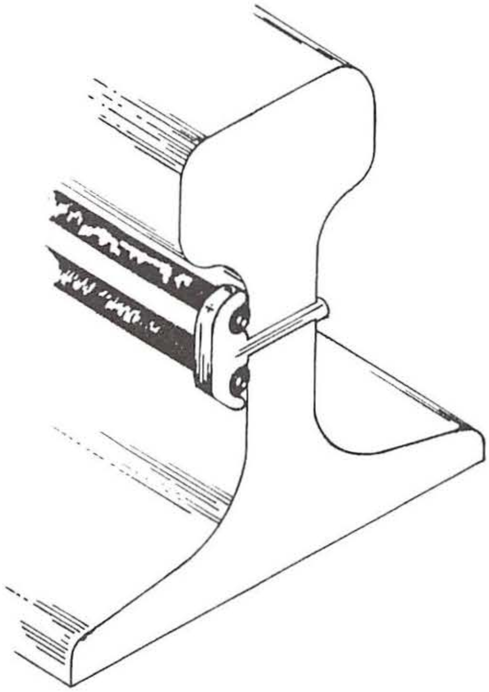
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Double-Entry Stranpin Cross Reference: Safetran No. 021624-6X	L&W P/N 1707-X

L&W industries, inc.

NONINSULATED
BRONZE DOUBLE WIREKEEPER

The Noninsulated Bronze Double Wire Keeper is designed to hold two 3/8" diameter wires or cables firmly against the web of the rail. Bronze construction provides excellent corrosion and vibration resistence. Installation is achieved by drilling a 3/8" dia. hole into the web of the rail and hammering the Noninsulated Bronze Double Wire Keeper into that hole while holding the two wires or cables in position.



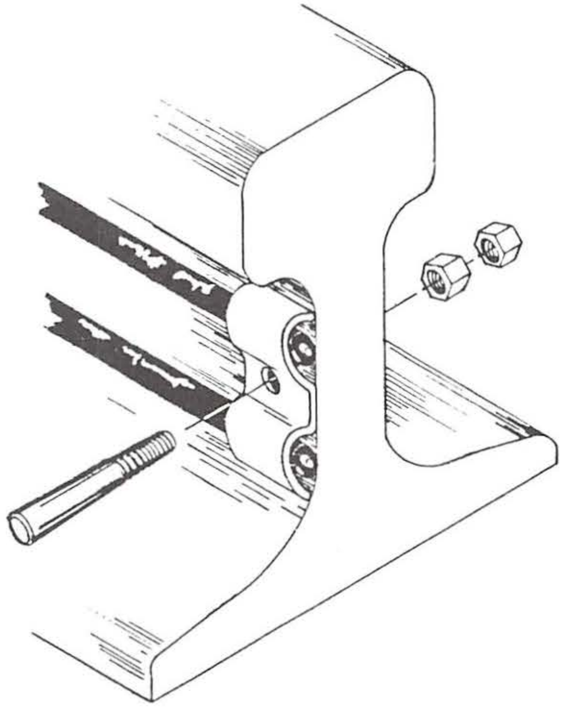
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Noninsulated Bronze Double Bondwire Keeper Cross Reference: Safetran No. 21208	L&W P/N 2375

L&W industries, inc.

NONINSULATED TWO-GROOVE DOUBLE WIRE CLAMP

The Noninsulated Two-Groove Double Wire Clamp is designed to hold two 3/8" diameter wires or cables firmly against the web of the rail. Installation is achieved by driving the tapered soft steel pin into a 3/8" diameter hole drilled into the web of the rail, and tightening on the double curved stainless steel clamp using the brass nut. An elastic stop nut is then applied to prevent loosening of the brass nut due to track vibration.



TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Noninsulated Two-Groove Double Wire Clamp with Brass nut and Elastic stop nut Cross Reference: Safetran No. 021515-1X	L&W P/N 1708-X

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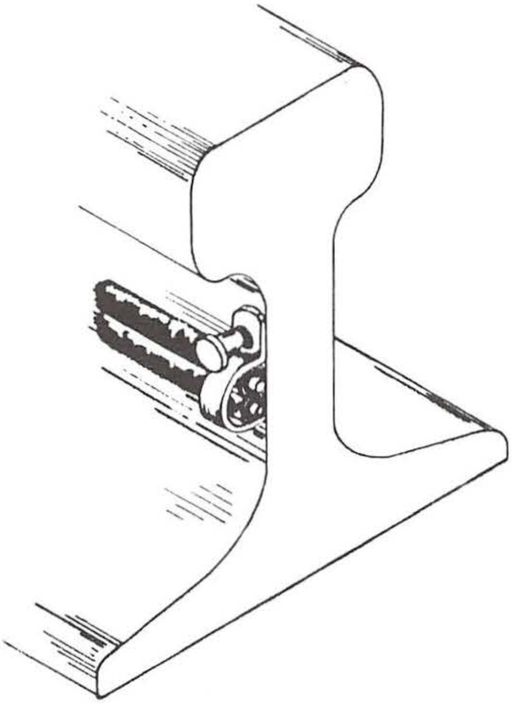
L&W industries, inc.

NONINSULATED ONE-GROOVE DOUBLE WIRE CLAMP

The Noninsulated One-Groove Double Wire Clamp is designed to hold two 3/8" diameter wires or cables firmly against the web of the rail. Installation is achieved by aligning the hole on the clamp with the 3/8" diameter hole drilled in the web of the rail. Then hammering the tapered pin through the aligned holes while holding the two wires or cables in place.



TO ORDER: Specify description and ordering reference.

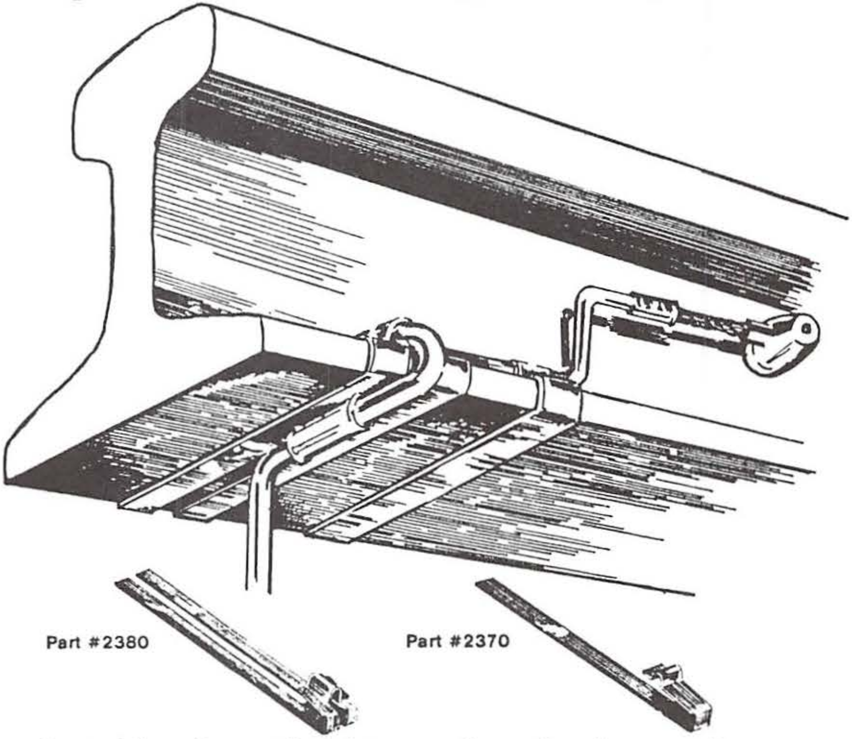
DESCRIPTION	ORDERING REFERENCE
Noninsulated One-Groove Double Wire Clamp with Retaining Pin Cross Reference: Safetran No. 021634-1X	L&W P/N 1779-X

L&W industries, inc.

BONDSTRAND RETAINING CLIPS

- -Stainless Steel
- -Accommodates up to 3/8" OD wire or cable
- -Fits all Rail Sizes
- -No Tools Required

To install, insert Bondstrand in clip, position clip under rail, then bend clip ends up and over opposite edge of rail base.



TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Perpendicular Bondwire Bondwire Retaining Clip Cross Reference: Erico No. SBA-203	L&W P/N 2370
Parallel Bondwire Retaining Clip Cross Reference: Erico No. SBA-154	L&W P/N 2380

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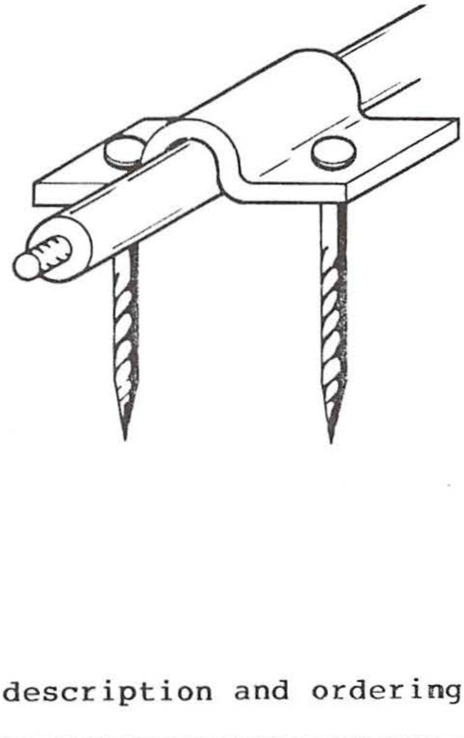
INSULATED SINGLE WIRE CLAMP

The Insulated Single Wire Clamp is manufactured from polypropeline plastic and is designed to hold one 3/8" diameter wire or cable firmly against a wood railroad tie by means of galvanized nails. Installation is achieved by aligning the 3/8" wire or cable with the wire groove and hammering the galvanized nails into the tie as required.

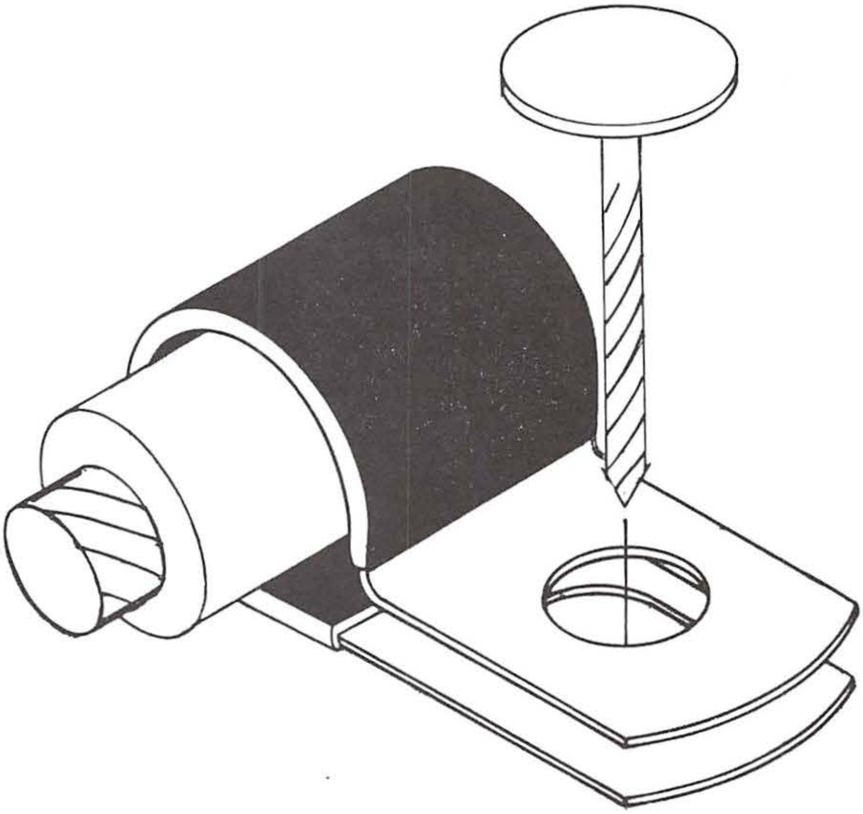


TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Insulated Single Wire Clamp with Galvanized Nails for 3/8" dia. Wire or Cable Cross Reference: Safetran No. 021378-23X	L&W P/N 1777-X

INSULATED WRAP-AROUND WIRE CLAMP

The Insulated Wrap-Around Wire Clamp is manufactured with a plastic insulated loop and is designed to hold one 3/8" diameter wire or cable firmly against a wood railroad tie. Installation is achieved by placing the 3/8" wire within the loop and then hammering the galvanized nail into the wooden tie as required.



ORDERING INFORMATION

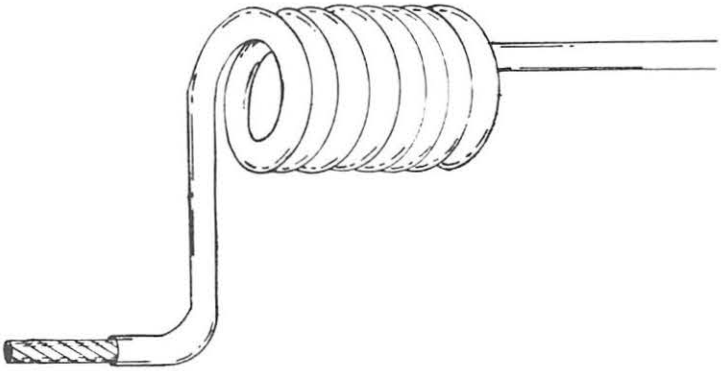
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Insulated Wrap-Around Wire Clamp with Galvinized Nail	L&W P/N 1775-X

L&W industries, inc.

BONDSTRAND

Bondstrand wire is available insulated with either High Density 105%C PVC or a Double Insulation of Rubber and Neoprene. Bare noninsulated Bondstrand wire is also available.

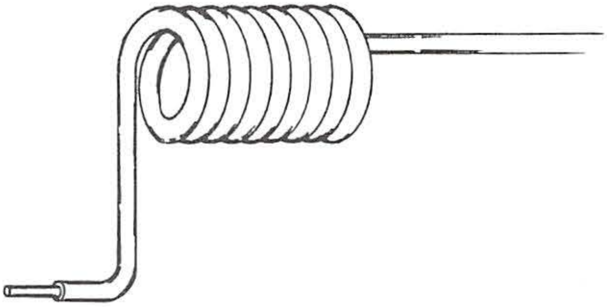


TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Bondstrand, 133 strand, 0.0130 in. Tinned Cadmium Bronze, with 0.080 in. 105%C PVC insulation Cross Reference: Safetran No. 021624-3 NEG No. 133664P	L&W P/N 6625
Bondstrand, 133 strand, 0.0125 in. Bare Cadmium Bronze, with 0.060 in. 105%C PVC insulation Cross Reference: Safetran No. 021624-2	L&W P/N 6626
Bondstrand, 133 Strand, 0.0125 in. Bare Cadmium Bronze, Non-insulated Cross Reference: Safetran No. 021624-1	L&W P/N 6628
Bondstrand, 133 Strand, 0.013 in. Tinned Cadmium Bronze, with 0.080 in. Rubber and 0.060 in. Neoprene	L&W P/N 6629

TRACK WIRE

Track Wire is available as No. 6 AWG or No. 9 AWG tinned solid soft drawn copper conductor with either a Polyetheline insulation and jacket or a Rubber insulation with a Neoprene jacket.



ORDERING INFORMATION

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERNCE
Track Wire, 1 conductor No. 9 AWG with 4/64" Polyethylene insulation, 5/64" Polyethylene jacket, and mylar tape separator.	L&W P/N 6600
Twisted Track Wire, consisting of two 1 conductor No. 9 AWG with 4/64" Polyethylene insulation, 5/64" Polyethylene jacket, and mylar tape separator, twisted one twist every 16"	L&W P/N 6601
Track Wire, 1 conductor No. 6 AWG with 4/64" Polyethylene insulation, 5/64" Polyethylene jacket, and mylar tape separator.	L&W P/N 6605
Twisted Track Wire, consisting of of two 1 conductor No. 6 AWG with 4/64" Polyethylene insulation, 5/64" Polyethylene jacket, and mylar tape separator, twisted one twist every 16".	L&W P/N 6606

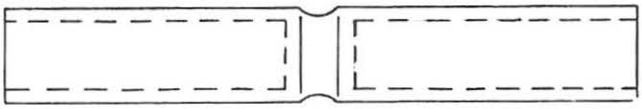
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Track Wire, 1 conductor No. 9 AWG with 5/64" Rubber insulation, and 4/64" Neoprene jacket	L&W P/N 6610
Twisted Track Wire, consisting of two 1 conductor No. 9 AWG with 5/64" Rubber insulation, and 4/64" Neoprene jacket, twisted one twist every 16"	L&W P/N 6611
Track Wire, 1 conductor No. 6 AWG with 5/64" Rubber insulation, and 4/64" Neoprene jacket	L&W P/N 6612
Twisted Track Wire, consisting of two 1 conductor No. 6 AWG with 5/64" Rubber insulation, and 4/64" Neoprene jacket, twisted one twist every 16"	L&W P/N 6613

L&W industries, inc.

SPLICING SLEEVE

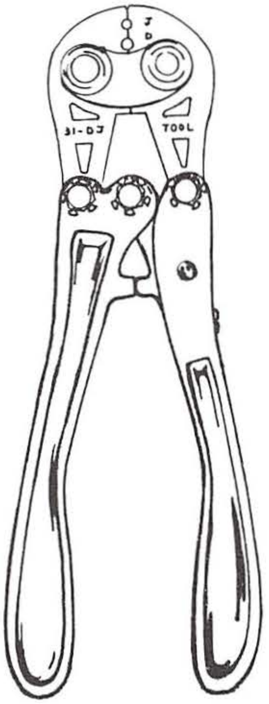
The splicing sleeve is designed to produce an electrical and mechanical connection between two wires. A variety of combinations can be made, between Bondstrand to Bondstrand, Bondstrand to Track Wire and Track Wire to Track Wire. Connections are accomplished by using the type 31-DJ Crimping Tool. For details of the type 31-DJ Crimping Tool see page 12-A-11. Other combinations of splicing sleeves between stranded and solid wires of various sizes are available upon request.



TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Splicing Sleeve, Bondstrand to Bondstrand	L&W P/N 2-367J
Splicing Sleeve, Bondstrand to No. 6 AWG solid wire	L&W P/N 2-363J
Splicing Sleeve, Bondstrand to No. 8 STD to No. 8 solid wire	L&W P/N 1-128J
Splicing Sleeve, Bondstrand to No. 9 AWG, or No. 10 AWG solid wire.	L&W P/N 2-314J
Splicing Sleeve, No. 9 AWG solid to No. 9 AWG solid wire	L&W P/N 1-114J

SLEEVE CRIMPING TOOL



The 31-DJ Splicing Sleeve crimping tool is designed to make connections to the 1700 Track Connector depicted on page 12-A-1 and to the Splicing Sleeves depicted on page 12-A-12 or any other compression sleeve with a "D" or "J" suffix letter attached to the sleeve part number. The all steel 31-DJ Tool is 11 3/4" long and weighs two pounds.

TO ORDER: Specify 31-DJ Sleeve Crimping Tool.

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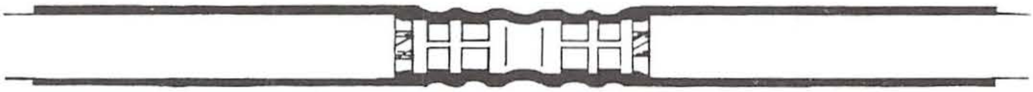
HEAT SHRINK TUBING

Heat Shrink Tubing is used to mechanically and electrically protect a Crimped Sleeve connection. It is manufactured from a crosslinked polyolefin material cut into 6" lengths with an expanded diameter of 0.8". When heated, it shrinks to a diameter of 0.22" and a wall thickness of 0.080". This 0.080" wall thickness provides a dielectric strength of 475 volts/mil. The inside wall of the heat shrink tubing has a continuous layer of adhesive to guarantee a watertight seal when shrunken around a wire or cable. To apply, place the heat Shrink Tubing over one of the wires or cables to be connected. After the Splicing Sleeve connection is made, slide the heat shrink tube over the connection and apply heat until the tube shrinks and adheres to the wires or cables and Splicing Sleeve.



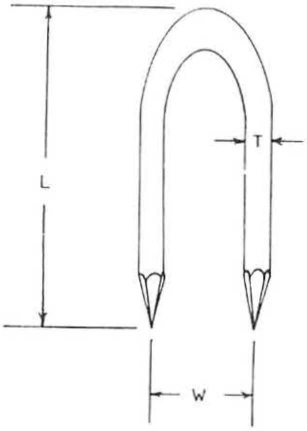
TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Heat Shrink Tubing, 6" long, 0.080" expanded diameter, 0.22" recovered wall thickness, 19KV recovered dielectric strength	L&W P/N 1760

L&W industries, inc.

STAPLES

Staples are manufactured from copper coated steel and have sharp diamond pointed ends.



TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Staple, copper coated, diamond point, L=1 1/2", W=5/16", and T=0.144"	L&W P/N 1762
Staple, copper coated, diamond point, L=1 3/4", W=3/8", and T=0.144"	L&W P/N 1763
Staple, copper coated diamond point, L=2", W=1/2", and T=0.162"	L&W P/N 1764
Staple, copper coated, diamond point, L=2", W=1 1/16, and T=0.182	L&W P/N 1765
Staple, copper coated, diamond point, L=3", W=1", and T=0.250"	L&W P/N 1766

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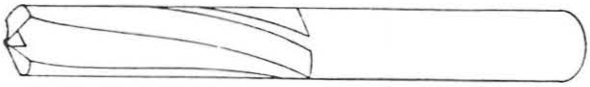
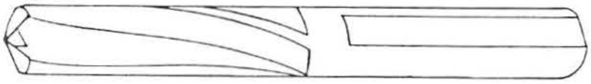
BONDING DRILL BITS

Bonding Drill Bits are manufactured from Cobalt Steel for use on hardened steel rail. Drill Bits come in two shaft diameters with flat or round shanks.



Round Shank



Flat Shank

ORDERING INFORMATION

TO ORDER: Specify description and ordering reference.

DESCRIPTION	ORDERING REFERENCE
Cobalt Bonding Drill Bit, 9/32" X 9/32" X 3" flat shank	L&W P/N 2842C
Cobalt Bonding Drill Bit, 3/8" X 3/8" X 3" flat shank	L&W P/N 2843C
Cobalt Bonding drill Bit, 3/8" X 9/32" X 3" flat shank	L&W P/N 2844C
Cobalt Bonding Drill Bit, 9/32" X 9/32" X 3" round shank	L&W P/N 2852C
Cobalt Bonding Drill Bit, 3/8" X 3/8" X 3" round shank	L&W P/N 2853C
Cobalt Bonding Drill Bit, 9/32" X 3/8" X 3" flat shank	L&W P/N 2865C

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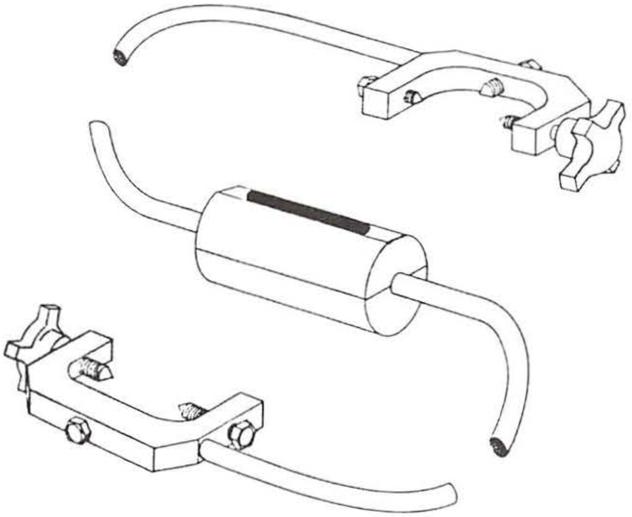
TRACK TEST SHUNT



- HARDWIRE AND 0.06 OHM SHUNT SWITCH SELECTABLE
- TOP OF RAIL MOUNT
- ENCAPSULATED TERMINALS AND RESISTOR FOR MAXIMUM PROTECTION
- SOLID STEEL CLAMPS
- FITS ALL RAIL SIZES
- ALL BOLT HEADS AND NUTS ARE OF AAR TERMINAL WRENCH SIZE
- EXTRA TOP OF RAIL CONTACT BOLT TO ENSURE SOLID CONNECTION ON LIGHTLY USED RAIL
- 6 FT OVERALL LENGTH FROM CENTER OF CLAMPS
- WIRE IS 6/64" PVC INSULATED FLEXIBLE 133 STRANDS TINNED BONDSTRAND
- WIRE CAN BE EASILY REPLACED WITH STANDARD TOOLS

DESCRIPTION	ORDERING REFERENCE
TRACK TEST SHUNT	L&W P/N 2900-X

L&W industries, inc.
3149 E. Chestnut Expressway • Springfield, MO 65802 • (417) 864-5411

November 2, 1993

THIS IS OUR 25th ANNIVERSARY THANKS TO YOU

Mr. B. R. Feely
Senior Engineer
Union Switch & Signal
5800 Corporate Dr.
Pittsburgh, PA 15237

Dear Mr. Feely:

Thank you for your interest in L&W Industries. Enclosed is some literature on our company as well as our products and services. If you should have any questions, please feel free to contact me at 800-852-5587.

Soon we will be sending out a new catalog with a price list. We will add your name to our catalog mailing list.

Again, thank you for contacting L&W Industries.

Sincerely,

Bob Watkins
Sales & Customer Service

BW:alj

Enc.